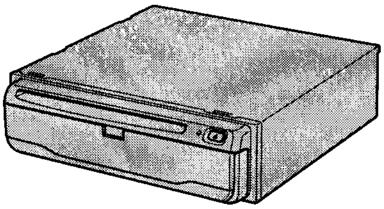
Pioneer

Service Manual



ORDER NO.
CRT2709

DVD NAVIGATION UNIT

AVIC-9DVD

UC

DVD VIDEO

COMPACT disc DIGITAL AUDIO

● **This service manual should be used together with the following manual(s):**

Model No.	Order No.	Mech. Module	Remarks
CX-954	CRT2670	MS2	DVD Mech. Module:Circuit Description, Mech.Description, Disassembly

● **Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.**

● **This product has the unit part numbers as below.**

Unit Part No.	Description
CPN1746	Main Assy

*) The unit part numbers listed above are not for the service components.

● **For your inspection, the following extention cords are supplied. Use them if necessary.**

Part to use	Part No.
Main PCB (CN3251) <--> DVD Core Unit V (CN1701)	GGD1170
Main PCB (CN3254) <--> CC Unit (CN302)	GGD1264
Main PCB (CN3901) <--> Interface PCB (CN5004)	GGD1171
Main PCB (CN552) <--> GPS Unit (CN461)	GGD1265
CC Unit (CN2) <--> DVD Core Unit V (CN1401)	GGD1268

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE INC. P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.
PIONEER EUROPE NV Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 253 Alexandra Road, #04-01, Singapore 159936

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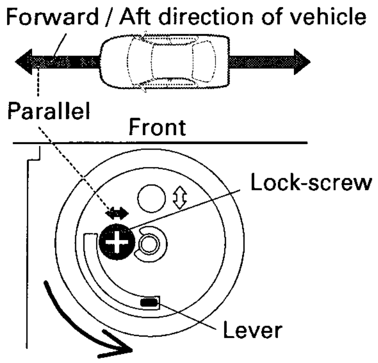
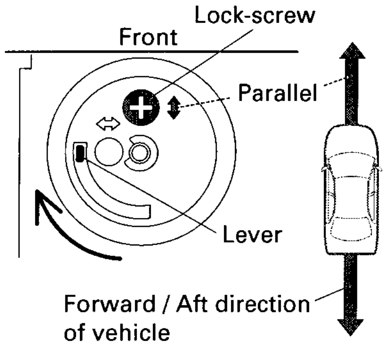
K-ZZY. JUNE 2001 Printed in Japan

● DVD Player Service Precautions

1. Never adjust the LD VR in the pickup unit to protect the pickup from electrical damages.
2. For pickup unit(service)(CXX1530) handling, please refer to"Disassembly"(see page 164). During replacement, handling precautions shall be taken to prevent an electrostatic discharge(set the short switch of the pickup unit to the SHORT side).
3. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.
4. Please adjusting the skew after changing the pickup unit(see page 123).

- High voltage is generated in the inverter when the power is supplied to the system. To avoid an electric shock, reconfirm that the power switch is set to OFF before starting operation.
- Check of installation direction when G-Sensor Unit was after repair.





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1. SAFETY INFORMATION

CAUTION

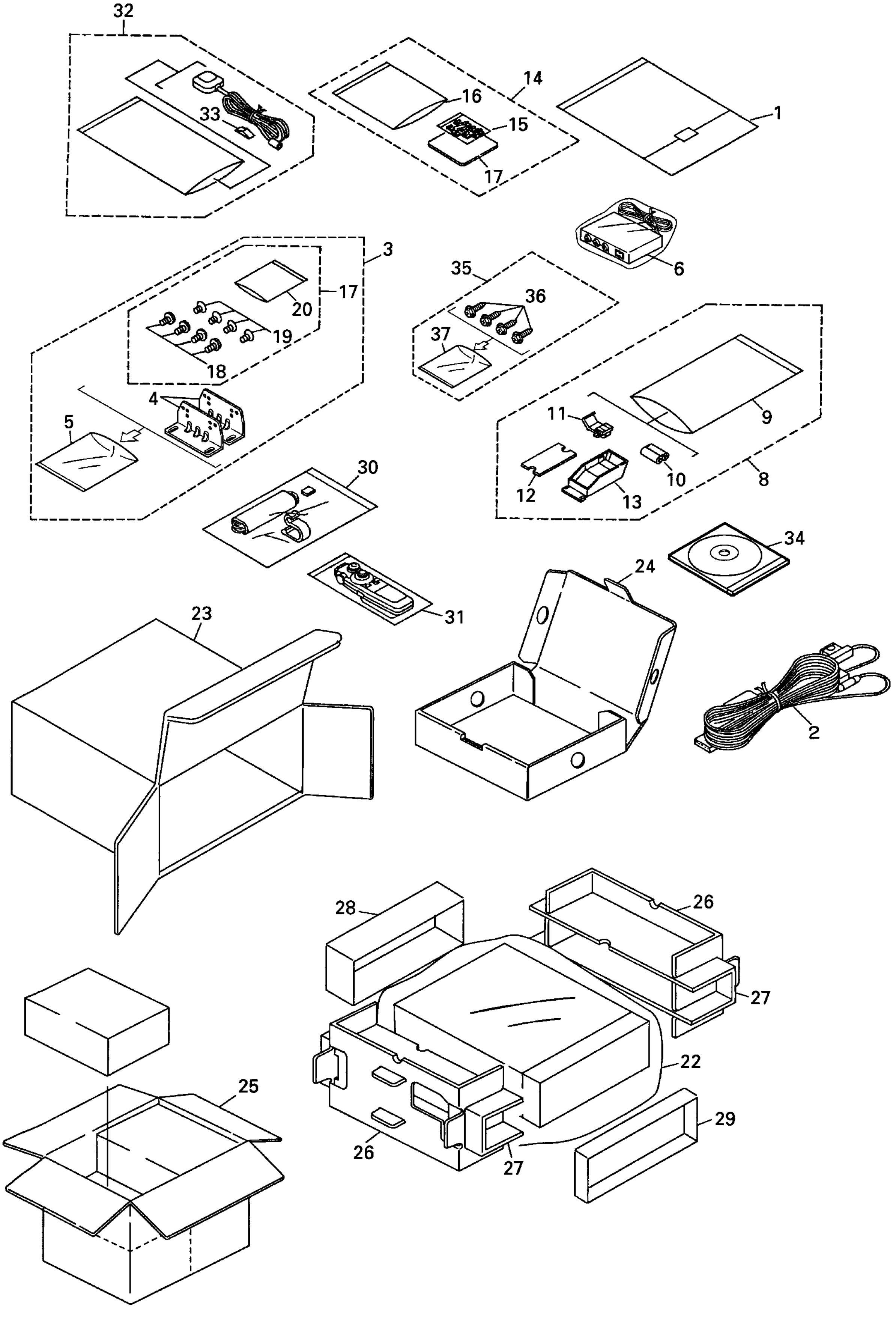
This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING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NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

● PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1-1	Owner's Manual	CRD3462
	1-2	Owner's Manual	CRB1694
	1-3	Owner's Manual/PA/FRE	CRB1695
	1-4	Installation Manual	CRD3457
*	1-5	Card	ARY1048
	1-6	Polyethylene Bag	CEG1116
	2	Cord Assy	CDE6678
	3	Accessory Assy	CEA2913
	4	Angle	CNC5619
*	5	Polyethylene Bag	E36-637
	6	Connection Box	CXB7595
	7	•••••	
	8	Accessory Assy	CEA2536
	9	Polyethylene Bag	CEG1011
	10	Battery	CEX1021
	11	Connector	CKX1049
	12	Sheet	CNM6370
	13	Holder	CNS5606
	14	Accessory Assy	CEA2643
	15	Cord Clamper Assy	CEA2644
	16	Polyethylene Bag	CEG1161
	17	Sheet	CNM6902
	18	Screw Assy	CEA2896
	19	Screw	BMZ50P060FZK
	20	Screw	CMZ50P060FMC
*	21	Polyethylene Sheet	CNM4338
	22	Polyethylene Bag	CEG1173
	23	Carton	CHG4391
	24	Sub Carton	CHG4392
	25	Contain Box	CHL4391
	26	Protector	CHP2383
	27	Protector	CHP2384
	28	Protector	CHP2386
	29	Protector	CHP2387
	30	Microphone Assy	CPM1048
	31	Remote Control Assy	CXB7426
	32	GPS Antenna Assy	CXB7600
	33	Water Proof Pad	CZN5352
	34	DVD-ROM	CPJ1134
	35	Screw Assy	CEA2938
	36	Screw(M6x16)	CBA1295
*	37	Polyethylene Bag	E36-613

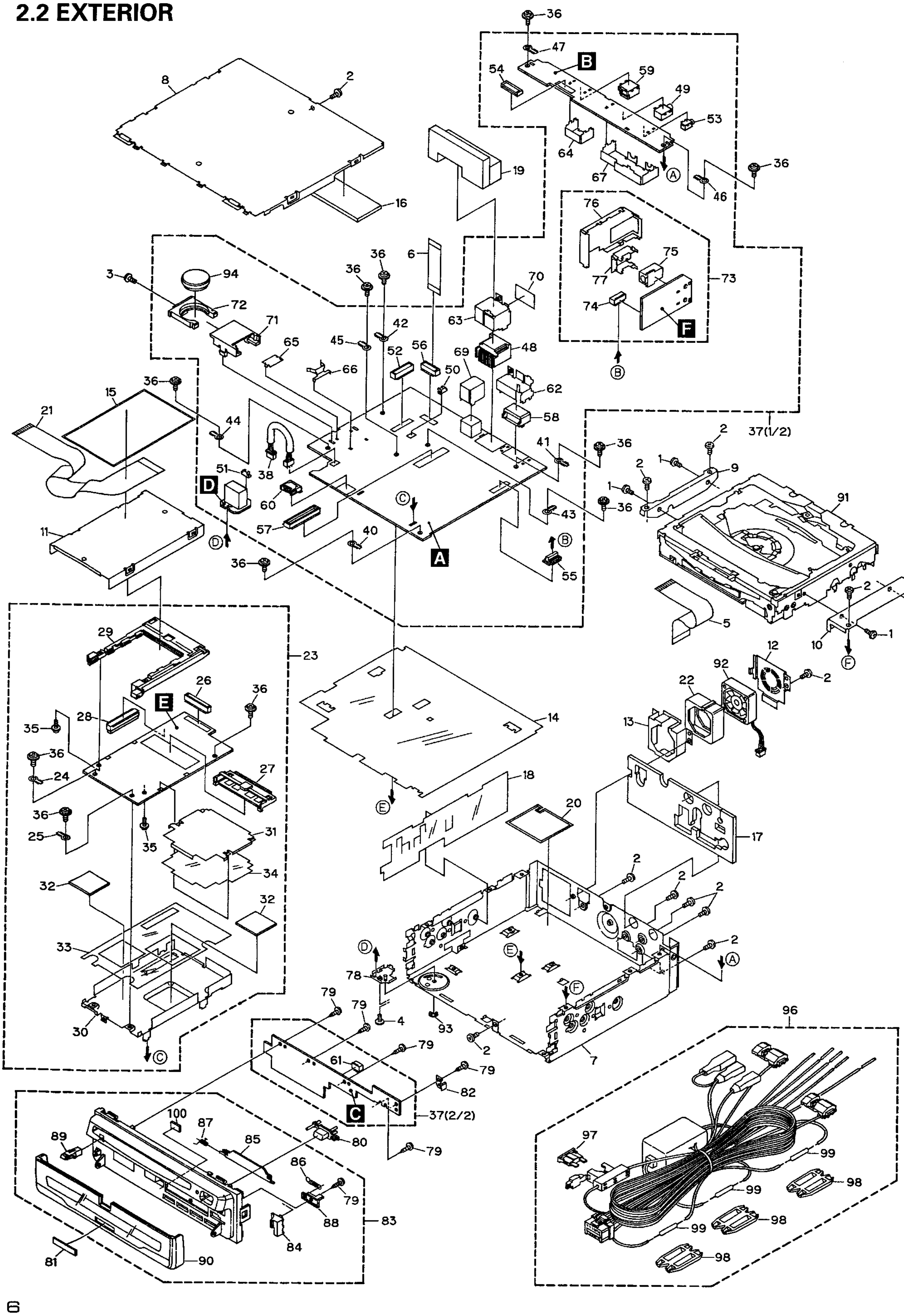
● Owner's Manual

Part No.	Language
CRD3462	English, French
CRB1694	English
CRB1695	French

● Installation Manual

Part No.	Language
CRD3457	English, French

2.2 EXTERIOR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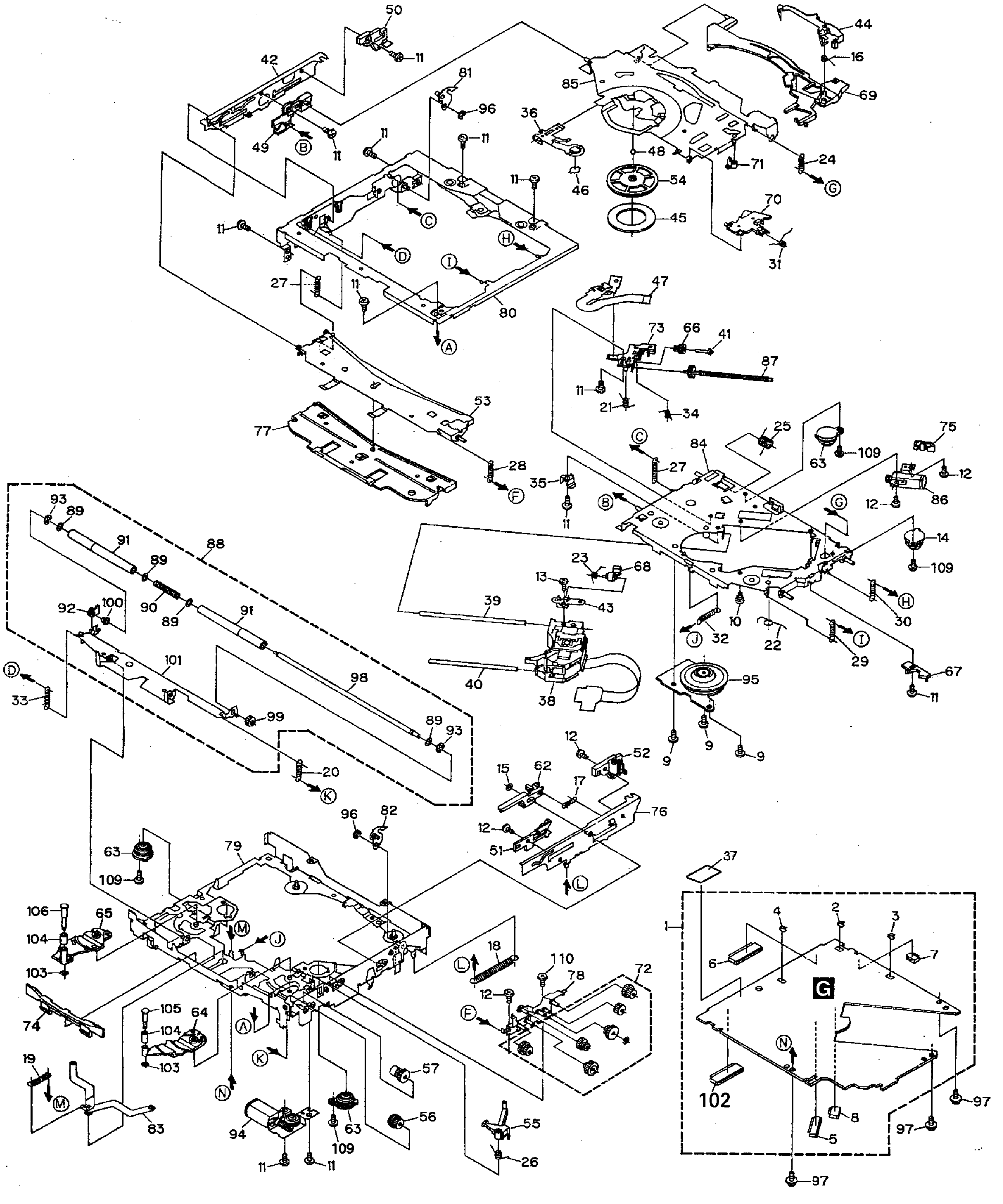
● EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ20P025FMC
	2	Screw	BMZ26P040FMC
	3	Screw(M2.6x4)	CBA1013
	4	Screw(M3x3)	CBA1534
	5	FFC	CDE6529
	6	FFC	CDE6530
	7	Chassis	CNA2418
	8	Case	CNB2712
	9	Bracket	CNC9280
	10	Bracket	CNC9281
	11	Shield	CNC9643
	12	Holder	CNC9719
	13	Holder	CNC9720
	14	Insulator	CNM7186
	15	Insulator	CNM7597
	16	Cushion	CNM7442
	17	Cushion	CNM7459
	18	Insulator	CNM7460
	19	Cushion	CNM7461
	20	Insulator	CNM7506
	21	PCB	CNP6231
	22	Cover	CNV6912
	23	CC Unit	CWM7894
	24	Terminal(CN99)	CKF1064
	25	Terminal(CN100)	CKF1064
	26	Connector(CN2)	CKS3930
	27	Connector(CN901)	CKS4070
	28	Connector(CN302)	CKS4429
	29	Connector	CKS4434
	30	Shield	CNC9267
	31	Shield	CNC9485
	32	Sheet	CNM6903
	33	Insulator	CNM7456
	34	Insulator	CNM7532
	35	Screw	IMS20P060FCR
	36	Screw	IMS26P030FMC
	37	Main Unit	CWM7614
	38	Cord Assy(CN555)	CDE5955
	39	•••••	
	40	Terminal(CN553)	CKF1064
	41	Terminal(CN554)	CKF1064
	42	Terminal(CN1803)	CKF1064
	43	Terminal(CN3258)	CKF1064
	44	Terminal(CN3259)	CKF1064
	45	Terminal(CN3903)	CKF1064
	46	Terminal(CN5006)	CKF1064
	47	Terminal(CN5007)	CKF1064
	48	Connector(CN1801)	CKM1341
	49	Jack(CN5005)	CKN1035
	50	Connector(CN1802)	CKS3124

Mark	No.	Description	Part No.
	51	Connector(CN556)	CKS3125
	52	Connector(CN3251)	CKS3751
	53	Connector(CN5001)	CKS3759
	54	Connector(CN5004)	CKS3991
	55	Connector(CN552)	CKS4065
	56	Connector(CN3901)	CKS4361
	57	Connector(CN3254)	CKS4430
	58	Connector(CN3257)	CKS4463
	59	Connector(CN5002)	CKS4473
	60	Connector(CN660)	CKS4518
	61	Connector(CN2851)	CKS4519
	62	Holder	CNC9270
	63	Holder	CNC9271
	64	Holder	CNC9272
	65	Holder	CNC9474
	66	Holder	CNC9475
	67	Holder	CNC9477
	68	•••••	
	69	Shield	CNC9635
	70	Insulator	CNM7535
	71	Holder	CNV6763
	72	Holder	CNV6764
	73	GPS Unit	CWX2591
	74	Connector(CN461)	CKS4280
	75	Connector(CN504)	CKS4432
	76	Shield	CNC9191
	77	Holder	CNC9252
	78	Holder Unit	CXB7069
	79	Screw	BPZ20P050FMC
	80	Button(EJECT)	CAC7005
*	81	Badge	CAH1754
	82	Earth Plate	CNC9476
	83	Grille Unit	CXB8290
	84	Button(PC-CARD)	CAC7105
	85	Door	CAT2285
	86	Spring	CBH2258
	87	Spring	CBH2499
	88	Holder	CNV6794
	89	Latch Unit	CXB3967
	90	Door Unit	CXB7566
	91	DVD Mechanism Module(MS2)	CXK6100
	92	Fan Motor	CXM1192
	93	Washer	YE20FUC
*	94	Battery	CEX1068
	95	•••••	
	96	Cord Assy	CDE6678
	97	Fuse(7.5A)	CEK1135
	98	Cap	CNS1472
	99	Resistor	RS1/2PMF102J
	100	Sheet	CNM7595

2.3 DVD MECHANISM MODULE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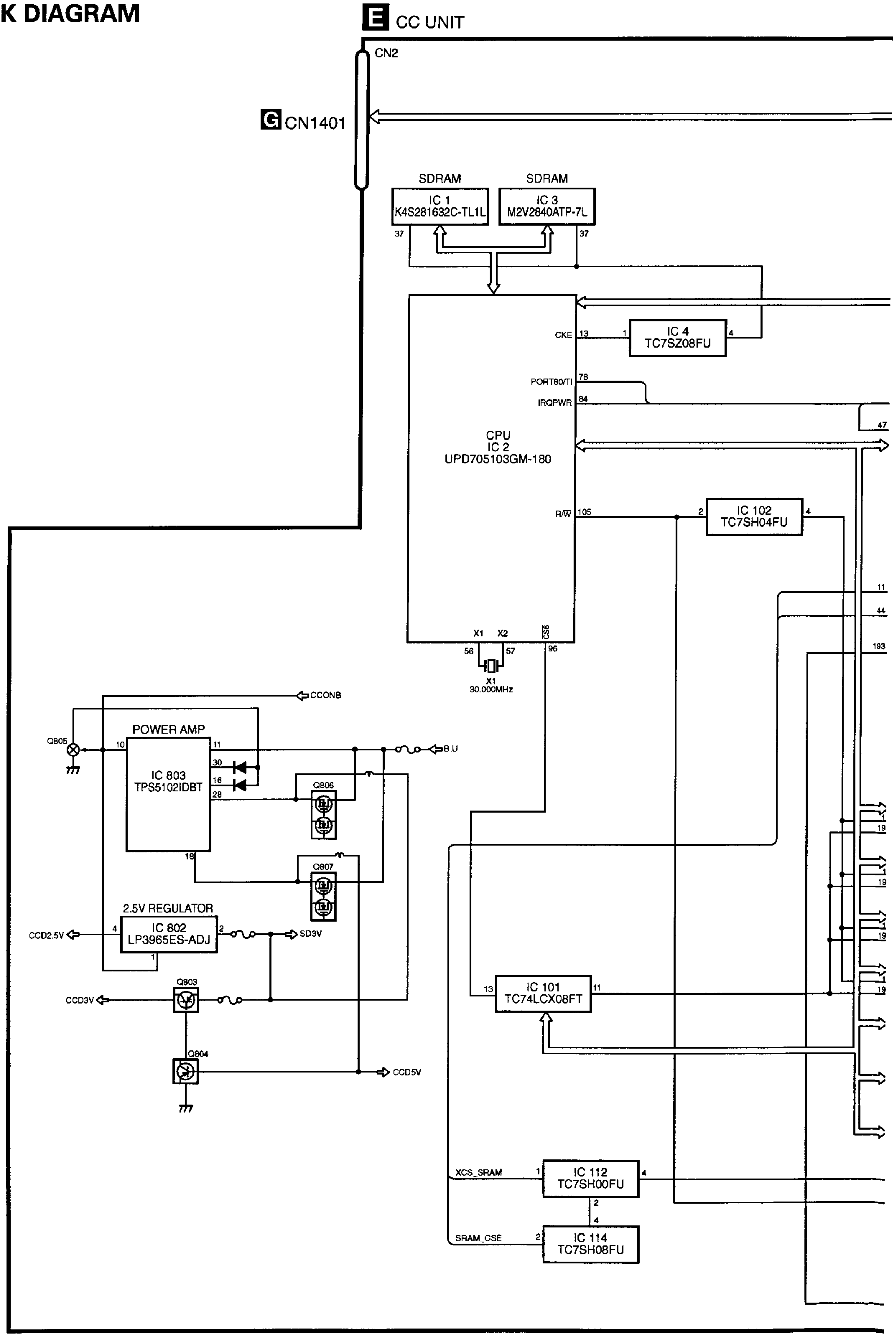
● DVD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	DVD Core Unit V	CWX2453
	2	Terminal(CN1703)	CKF1065
	3	Terminal(CN1705)	CKF1065
	4	Terminal(CN1706)	CKF1065
	5	Connector(CN1100)	CKS3749
	6	Connector(CN1701)	CKS4052
	7	Connector(CN1700)	CKS4374
	8	Connector(CN1300)	CKS4507
	9	Screw(M2x3)	CBA1486
	10	Screw	CBA1535
	11	Screw(M2x2.2)	CBA1547
	12	Screw(M2x2.2)	CBA1548
	13	Screw(M1.4x2)	CBA1549
	14	Damper	CNV6927
	15	Washer	CBF1038
	16	Spring	CBH2394
	17	Spring	CBH2395
	18	Spring	CBH2396
	19	Spring	CBH2397
	20	Spring	CBH2398
	21	Spring	CBH2399
	22	Spring	CBH2400
	23	Spring	CBH2401
	24	Spring	CBH2402
	25	Spring	CBH2403
	26	Spring	CBH2404
	27	Spring	CBH2405
	28	Spring	CBH2406
	29	Spring	CBH2407
	30	Spring	CBH2408
	31	Spring	CBH2410
	32	Spring	CBH2411
	33	Spring	CBH2413
	34	Spring	CBH2414
	35	Spring	CBL1499
	36	Spring	CBL1500
	37	Sheet	CNM7590
	38	Pickup Unit(Service)(DP4)	CXX1530
	39	Shaft	CLA3878
	40	Shaft	CLA3879
	41	Shaft	CLA3881
	42	Lever	CNC8988
	43	Bracket	CNC8992
	44	Arm	CNC8994
	45	Sheet	CNM6883
	46	Sheet	CNM6884
	47	PCB	CNP5971
	48	Ball	CNR1189
	49	Guide	CNV6352
	50	Guide	CNV6353
	51	Guide	CNV6354
	52	Guide	CNV6355
	53	Guide	CNV6356
	54	Clamper	CNV6357
	55	Arm	CNV6358
	56	Gear	CNV6361
	57	Gear	CNV6362
	58-61	•••••	
	62	Rack	CNV6367
	63	Damper	CNV6368
	64	Arm	CNV6369
	65	Arm	CNV6370
	66	Gear	CNV6372
	67	Holder	CNV6374
	68	Rack	CNV6376
	69	Arm	CNV6377
	70	Arm	CNV6378
	71	Arm	CNV6379
	72	Gear Unit	CXB5959
	73	Holder	CNV6383
	74	Guide	CNV6384
	75	Holder	CNV6385
	76	Lever Unit	CXB5943
	77	Holder Unit	CXB5944
*	78	Holder Unit	CXB5947
	79	Frame Unit	CXB5948
	80	Frame Unit	CXB5949
	81	Arm Unit	CXB5950
	82	Arm Unit	CXB5951
	83	Arm Unit	CXB5952
	84	Chassis Unit	CXB5953
	85	Arm Unit	CXB5954
	86	Motor Unit(CRG)	CXB5955
	87	Screw Unit	CXB5957
	88	Roller Unit	CXB5958
	89	Washer	CBF1060
	90	Spring	CBH2170
	91	Roller	CNV6068
	92	Holder	CNV6210
	93	Washer	YE20FUC
	94	Motor Unit(LOAD)	CXB5960
	95	Motor Unit(SPDL)	CXB6218
	96	Washer	YE15FUC
	97	Screw	IMS20P030FMC
*	98	Shaft	CLA3877
*	99	Gear	CNV6359
*	100	Collar	CNV6382
*	101	Arm Unit	CXB5945
	102	Connector(CN1401)	CKS4052
	103	Washer	CBF1087
	104	Roller	CNV6928
	105	Shaft	CLA4091
	106	Shaft	CLA4092
	107,108	•••••	
	109	Screw (M2x3.5)	CBA1560
	110	Screw (M2x2.2)	CBA1419

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM


E CC UNIT
CN2
G CN1401
SDRAM
IC 1
K4S281632C-TL1L
SDRAM
IC 3
M2V2840ATP-7L
37
37
CKE
13
1
IC 4
TC7SZ08FU
4
PORT80/TI
78
IRQPWR
84
47
CPU
IC 2
UPD705103GM-180
R/W
105
2
IC 102
TC7SH04FU
4
11
44
193
X1
X2
CS6
56
57
96
X1
30.000MHz
CCONB
Q805
POWER AMP
10
11
IC 803
TPS5102IDBT
30
16
28
18
B.U
Q806
Q807
2.5V REGULATOR
CCD2.5V
4
IC 802
LP3965ES-ADJ
2
1
SD3V
Q803
CCD3V
Q804
CCD5V
13
IC 101
TC74LCX08FT
11
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SRAM_CSE
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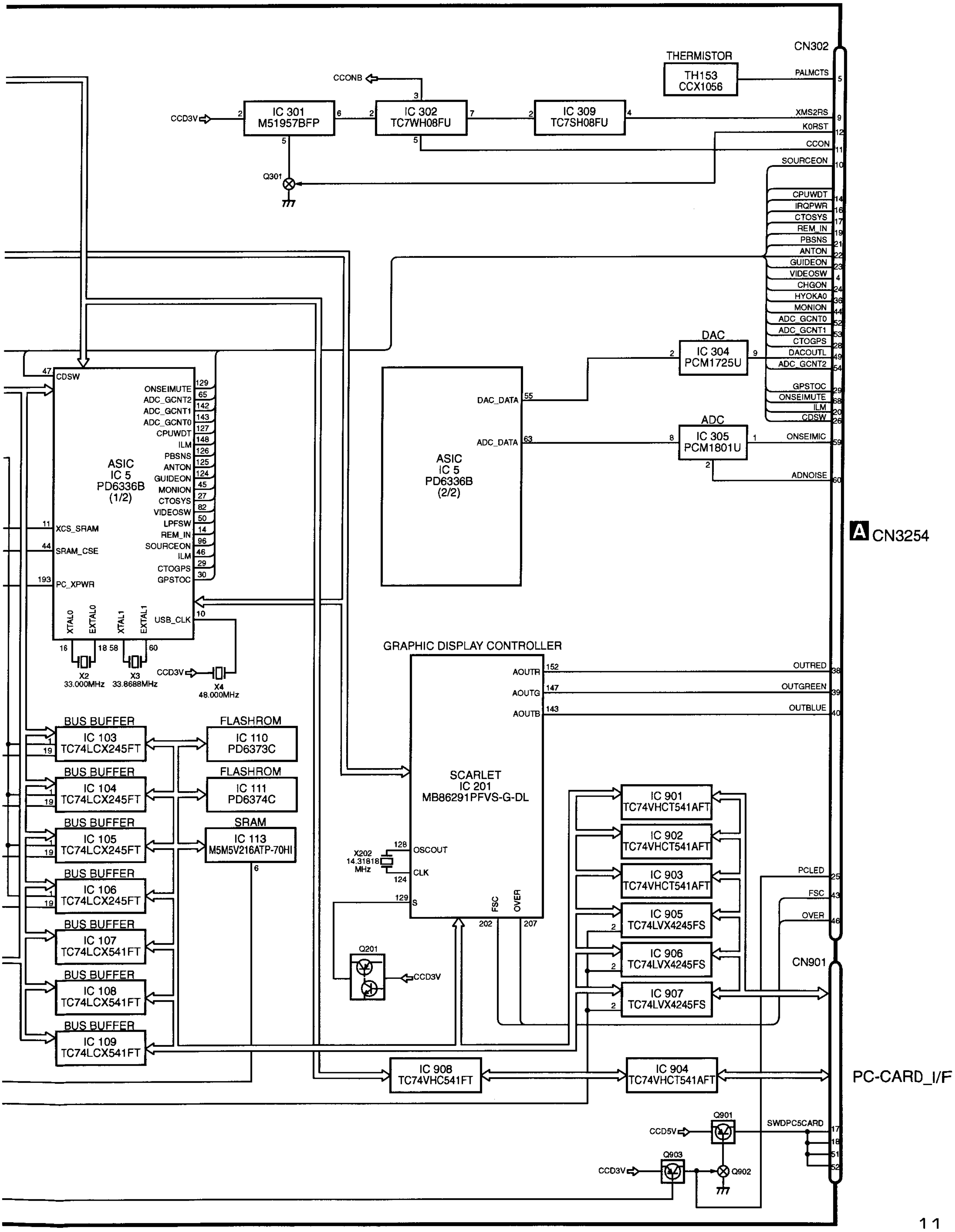
IC 114
TC7SH08FU


CN302
THERMISTOR
TH153
CCX1056
PALMCTS 5
CCONB
CCD3V
IC 301
M51957BFP
IC 302
TC7WH08FU
IC 309
TC7SH08FU
XMS2RS 9
KORST 12
CCON 11
SOURCEON 10
Q301
CPUWDT 14
IRQPWR 16
CTOSYS 17
REM_IN 19
PBSNS 21
ANTON 22
GUIDEON 23
VIDEOSW 4
CHGON 24
HYOKA0 36
MONION 44
ADC_GCNT0 52
ADC_GCNT1 53
CTOGPS 28
DACOUTL 49
ADC_GCNT2 54
GPSTOC 29
ONSEIMUTE 68
ILM 20
CDSW 26
DAC
IC 304
PCM1725U
ADC
IC 305
PCM1801U
ONSEIMIC 59
ADNOISE 60
ASIC
IC 5
PD6336B
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CDSW
ONSEIMUTE
ADC_GCNT2
ADC_GCNT1
ADC_GCNT0
CPUWDT
ILM
PBSNS
ANTON
GUIDEON
MONION
CTOSYS
VIDEOSW
LPFSW
REM_IN
SOURCEON
ILM
CTOGPS
GPSTOC
XCS_SRAM
SRAM_CSE
PC_XPWR
XTAL0
EXTAL0
XTAL1
EXTAL1
USB_CLK
X2
33.000MHz
X3
33.8688MHz
X4
48.000MHz
ASIC
IC 5
PD6336B
(2/2)
DAC_DATA
ADC_DATA
A CN3254
GRAPHIC DISPLAY CONTROLLER
SCARLET
IC 201
MB86291PFVS-G-DL
AOUTR
AOUTG
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OUTRED 38
OUTGREEN 39
OUTBLUE 40
OSCOUT
CLK
S
FSC
OVER
X202
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MHz
Q201
BUS BUFFER
IC 103
TC74LCX245FT
BUS BUFFER
IC 104
TC74LCX245FT
BUS BUFFER
IC 105
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BUS BUFFER
IC 106
TC74LCX245FT
BUS BUFFER
IC 107
TC74LCX541FT
BUS BUFFER
IC 108
TC74LCX541FT
BUS BUFFER
IC 109
TC74LCX541FT
FLASHROM
IC 110
PD6373C
FLASHROM
IC 111
PD6374C
SRAM
IC 113
M5M5V216ATP-70HI
IC 901
TC74VHCT541AFT
IC 902
TC74VHCT541AFT
IC 903
TC74VHCT541AFT
IC 905
TC74LVX4245FS
IC 906
TC74LVX4245FS
IC 907
TC74LVX4245FS
PCLED 25
FSC 43
OVER 46
CN901
IC 908
TC74VHC541FT
IC 904
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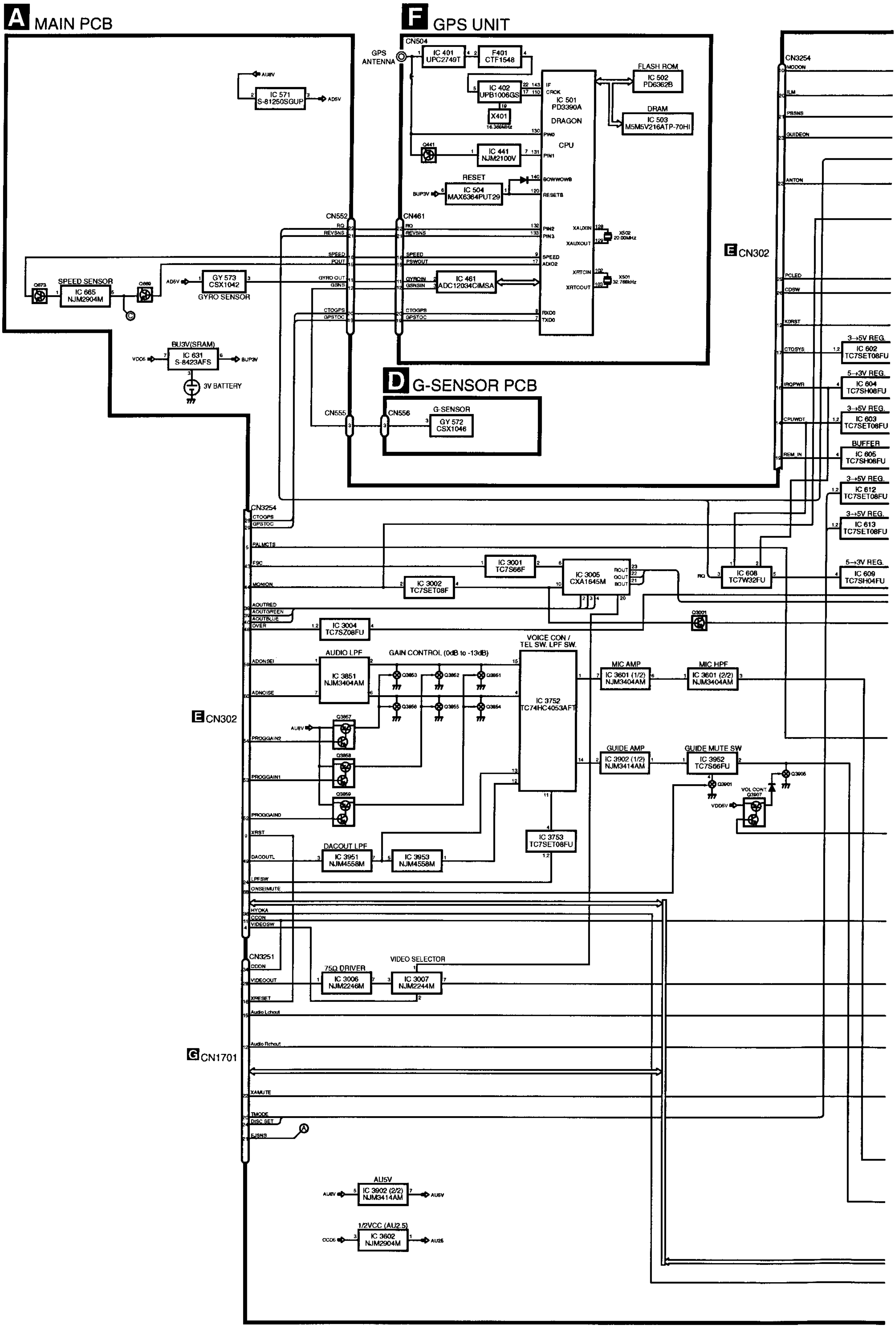
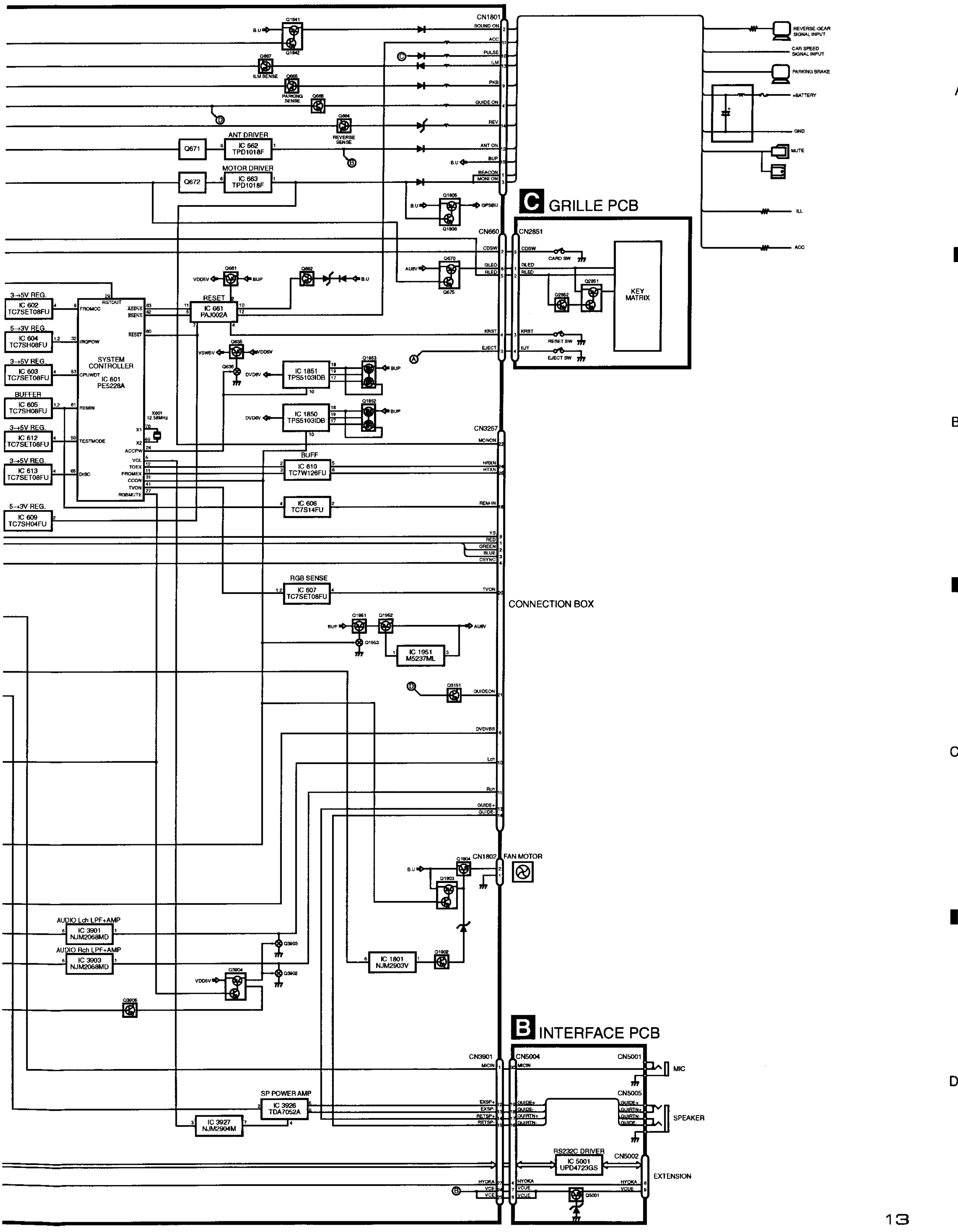
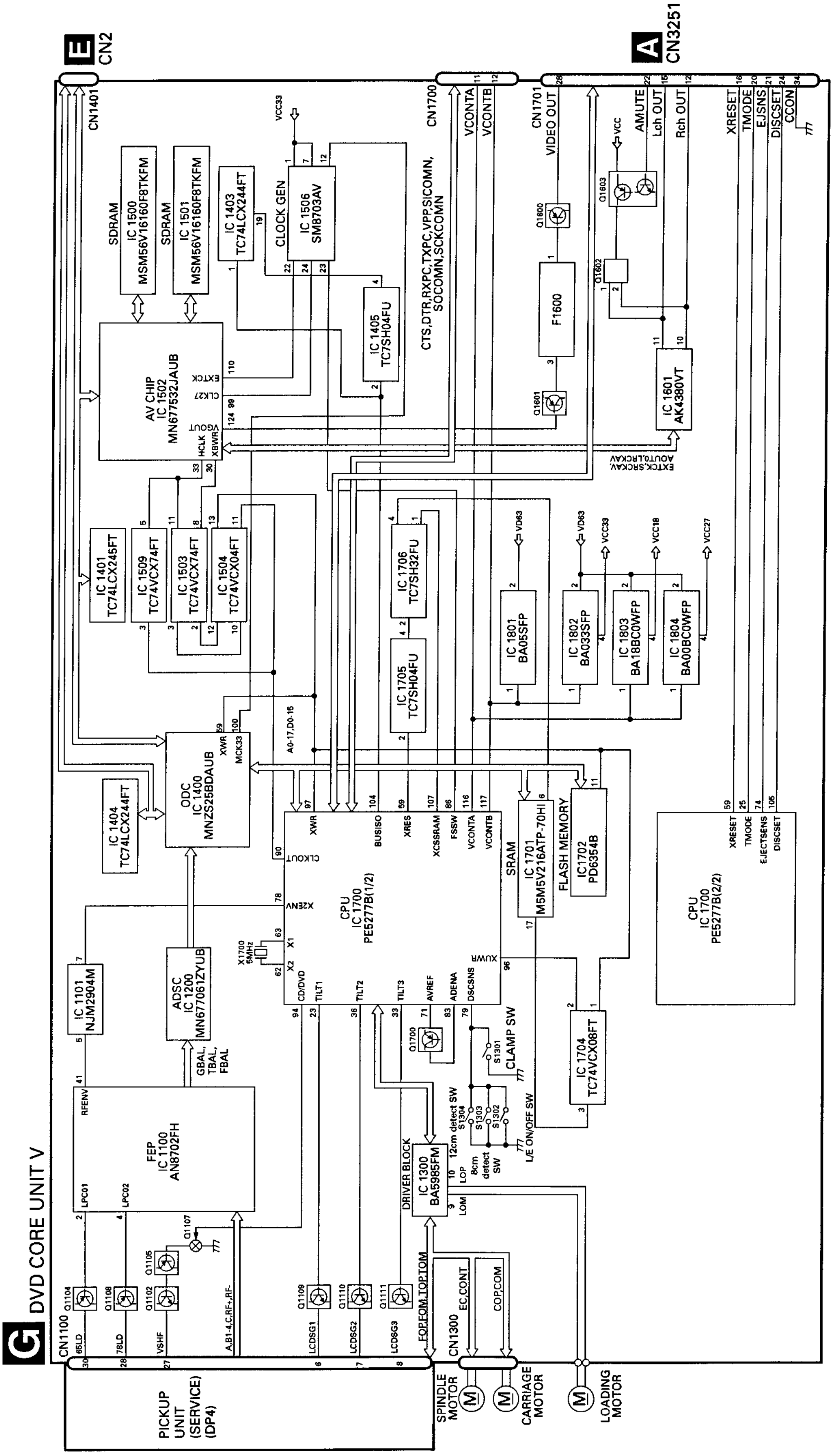
Q903
CCD3V
Q902

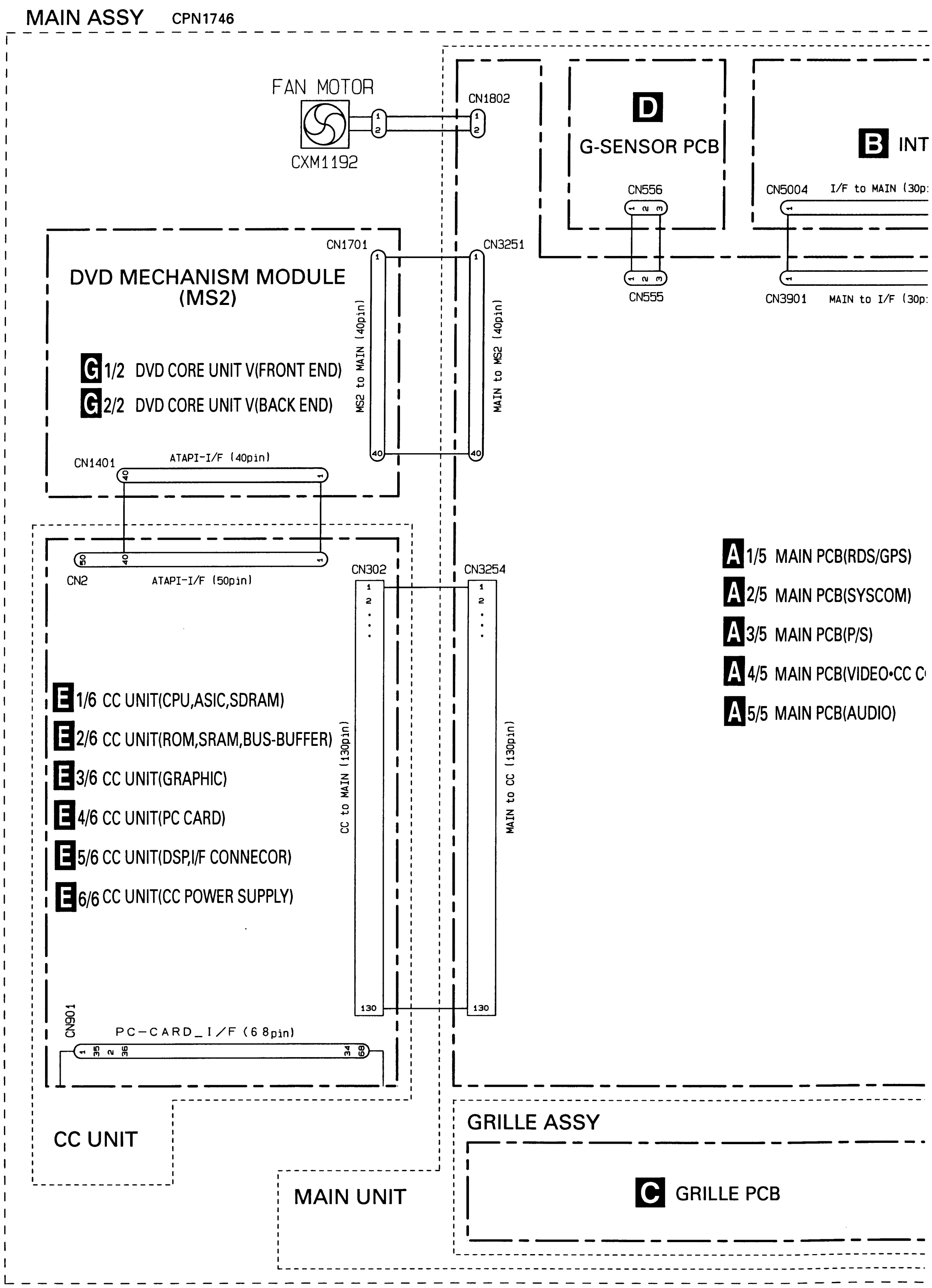

A MAIN PCB
F GPS UNIT
D G-SENSOR PCB
E CN302
G CN1701
CN504
GPS ANTENNA
IC 401 UPC2749T
F401 CTF1548
IC 402 UPB1006GS
X401 16.368MHz
IC 501 PD3390A DRAGON CPU
FLASH ROM
IC 502 PD6362B
DRAM
IC 503 M5M5V216ATP-70HI
Q441
IC 441 NJM2100V
RESET
IC 504 MAX6364PUT29
BUP3V
X502 20.00MHz
X501 32.768kHz
IC 461 ADC12034CIMSA
CN461
CN552
CN555
CN556
G-SENSOR
GY 572 CSX1046
IC 571 S-81250SGUP
AU8V
AD5V
SPEED SENSOR
IC 665 NJM2904M
Q673
Q669
GY 573 CSX1042
GYRO SENSOR
BU3V(SRAM)
IC 631 S-8423AFS
VDD5
BUP3V
3V BATTERY
CN3254
CTOGPS
GPSTOC
PALMCTS
FSC
MONION
AOUTRED
AOUTGREEN
AOUTBLUE
OVER
IC 3001 TC7S66F
IC 3002 TC7SET08F
IC 3005 CXA1645M
ROUT
GOUT
BOUT
IC 3004 TC7SZ08FU
Q3001
IC 608 TC7W32FU
RG
3→5V REG.
IC 602 TC7SET08FU
5→3V REG.
IC 604 TC7SH08FU
3→5V REG.
IC 603 TC7SET08FU
BUFFER
IC 605 TC7SH08FU
3→5V REG.
IC 612 TC7SET08FU
3→5V REG.
IC 613 TC7SET08FU
5→3V REG.
IC 609 TC7SH04FU
MODON
ILM
PBSNS
GUIDEON
ANTON
PCLED
CDSW
KDRST
CTOSYS
IRQPWR
CPUWDT
REM_IN
AUDIO LPF
GAIN CONTROL (0dB to -13dB)
IC 3851 NJM3404AM
ADONSEI
ADNOISE
Q3853
Q3852
Q3851
Q3856
Q3855
Q3854
Q3857
Q3858
Q3859
PROGGAIN2
PROGGAIN1
PROGGAIN0
VOICE CON / TEL SW. LPF SW.
IC 3752 TC74HC4053AFT
IC 3753 TC7SET08FU
MIC AMP
IC 3601 (1/2) NJM3404AM
MIC HPF
IC 3601 (2/2) NJM3404AM
GUIDE AMP
IC 3902 (1/2) NJM3414AM
GUIDE MUTE SW
IC 3952 TC7S66FU
Q3901
Q3905
VOL CONT Q3907
VDD5V
XRST
DACOUTL
DACOUT LPF
IC 3951 NJM4558M
IC 3953 NJM4558M
LPFSW
ONSEIMUTE
HYOKA
CCON
VIDEOSW
CN3251
CCON
VIDEOOUT
XRESET
Audio Lchout
Audio Rchout
75Ω DRIVER
IC 3006 NJM2246M
VIDEO SELECTOR
IC 3007 NJM2244M
XAMUTE
TMODE
DISC SET
EJSNS
AU5V
IC 3902 (2/2) NJM3414AM
1/2VCC (AU2.5)
IC 3602 NJM2904M
CCD5
AU25

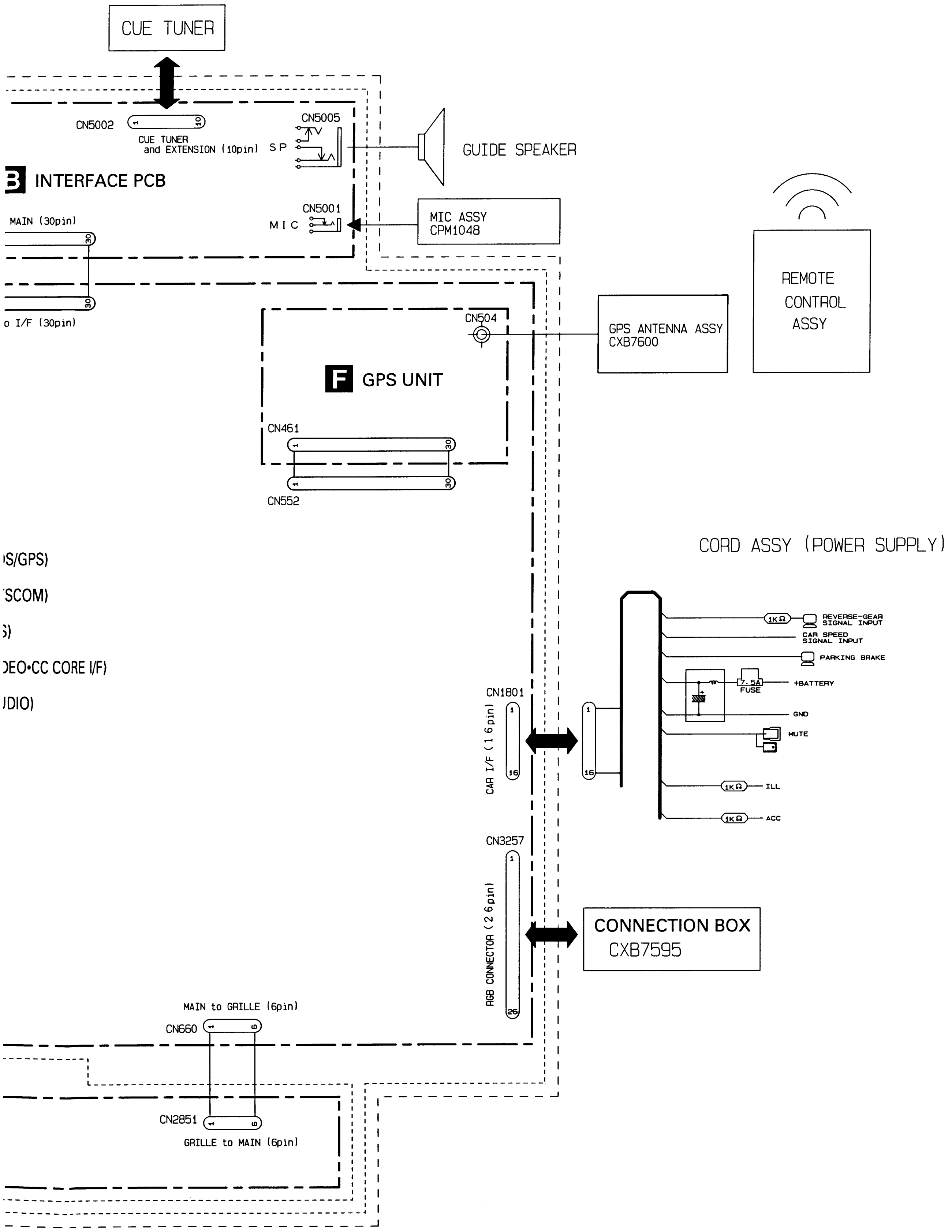

CN1801
SOUND ON
ACC
PULSE
ILM
PKB
GUIDE ON
REV
ANT ON
BUP
BEACON
MONI ON
B.U
Q1841
Q1842
Q667
ILM SENSE
Q665
PARKING SENSE
Q668
Q664
REVERSE SENSE
ANT DRIVER
IC 662
TPD1018F
Q671
MOTOR DRIVER
IC 663
TPD1018F
Q672
Q1805
Q1806
GPSBU
REVERSE-GEAR SIGNAL INPUT
CAR SPEED SIGNAL INPUT
PARKING BRAKE
+BATTERY
GND
MUTE
ILL
ACC
C
GRILLE PCB
CN660
CN2851
CDSW
GLED
RLED
KRST
EJECT
EJT
CARD SW
RESET SW
EJECT SW
Q2851
Q2852
KEY MATRIX
Q670
Q675
AU8V
Q661
VDD5V
BUP
Q662
RESET
IC 661
PAJ002A
3→5V REG.
IC 602
TC7SET08FU
5→3V REG.
IC 604
TC7SH08FU
3→5V REG.
IC 603
TC7SET08FU
BUFFER
IC 605
TC7SH08FU
3→5V REG.
IC 612
TC7SET08FU
3→5V REG.
IC 613
TC7SET08FU
5→3V REG.
IC 609
TC7SH04FU
SYSTEM CONTROLLER
IC 601
PE5228A
RSTOUT
FROMCC
IRQPOW
CPUWDT
REMIN
TESTMODE
DISC
ASENS
BSENS
RESET
X1
X2
ACCPW
VOL
TOEX
FROMEX
CCON
TVON
RGBMUTE
X601
12.58MHz
Q635
VSW5V
Q636
DVD8V
IC 1851
TPS5103IDB
Q1853
IC 1850
TPS5103IDB
Q1852
CN3257
MONON
BUFF
IC 610
TC7W126FU
HRXN
HTXN
IC 606
TC7S14FU
REM-IN
YS
RED
GREEN
BLUE
CSYNC
RGB SENSE
IC 607
TC7SET08FU
TVON
CONNECTION BOX
Q1951
Q1952
Q1953
IC 1951
M5237ML
Q3151
GUIDEON
DVDVBS
Lch
Rch
GUIDE+
GUIDE-
CN1802
FAN MOTOR
Q1804
Q1803
IC 1801
NJM2903V
Q1802
AUDIO Lch LPF+AMP
IC 3901
NJM2068MD
AUDIO Rch LPF+AMP
IC 3903
NJM2068MD
Q3903
Q3902
Q3904
Q3906
B
INTERFACE PCB
CN3901
CN5004
CN5001
MICIN
MIC
CN5005
SPEAKER
GUIDE+
GUIDE-
GUIRTN+
GUIRTN-
SP POWER AMP
IC 3926
TDA7052A
IC 3927
NJM2904M
EXSP+
EXSP-
RETSP+
RETSP-
RS232C DRIVER
IC 5001
UPD4723GS
CN5002
EXTENSION
HYOKA
VCE
VCUE
Q5001
A
B
C
D


E CN2
A CN3251
G DVD CORE UNIT V
CN1401
SDRAM IC 1500 MSM56V16160F8TKFM
SDRAM IC 1501 MSM56V16160F8TKFM
IC 1403 TC74LCX244FT
CLOCK GEN IC 1506 SM8703AV
VCC33
IC 1405 TC7SH04FU
CTS,DTR,RXPC,TXPC,VPP,SICOMN,
SOCOMN,SCKCOMN
CN1700
VCONTA
VCONTB
CN1701
VIDEO OUT
VCC
AMUTE
Lch OUT
Rch OUT
XRESET
TMODE
EJSNS
DISCSET
CCON
Q1600
Q1603
Q1602
F1600
Q1601
IC 1601 AK4380VT
AOUT0,LRCKAV,
EXTCK,SRCKAV,
AV CHIP IC 1502 MN677532JAUB
EXTCK
CLK27
VGOUT
HCLK
XBWR
IC 1401 TC74LCX245FT
IC 1509 TC74VCX74FT
IC 1503 TC74VCX74FT
IC 1504 TC74VCX04FT
IC 1706 TC7SH32FU
IC 1705 TC7SH04FU
IC 1801 BA05SFP
VD63
IC 1802 BA033SFP
VD63
VCC33
IC 1803 BA18BC0WFP
VCC18
IC 1804 BA00BC0WFP
VCC27
ODC IC 1400 MNZS25BDAUB
XWR
MCK33
A0-17,D0-15
IC 1404 TC74LCX244FT
CPU IC 1700 PE5277B(1/2)
XWR
BUSISO
XRES
XCSSRAM
FSSW
VCONTA
VCONTB
CLKOUT
XZENV
X1
X2
CD/DVD
TILT1
TILT2
TILT3
AVREF
ADENA
DSCSNS
XUWR
X1700 5MHz
SRAM IC 1701 M5M5V216ATP-70HI
FLASH MEMORY IC1702 PD6354B
CPU IC 1700 PE5277B(2/2)
XRESET
TMODE
EJECTSENS
DISCSET
IC 1101 NJM2904M
ADSC IC 1200 MN677061ZYUB
GBAL, TBAL, FBAL
Q1700
CLAMP SW
S1301
IC 1704 TC74VCX08FT
12cm detect SW
S1304
S1303
S1302
L/E ON/OFF SW
FEP IC 1100 AN8702FH
RFENV
LPC01
LPC02
Q1107
Q1105
Q1102
Q1104
Q1108
Q1109
Q1110
Q1111
DRIVER BLOCK IC 1300 BA5985FM
LOP
LOM
8cm detect SW
CN1100
65LD
78LD
VSHF
A,B1-4,C,RF+,RF-
LCDSG1
LCDSG2
LCDSG3
FOP,FOM,TOP,TOM
CN1300
EC,CONT
COP,COM
PICKUP UNIT (SERVICE) (DP4)
M
SPINDLE MOTOR
CARRIAGE MOTOR
LOADING MOTOR

3.2 OVERALL CONNECTION DIAGRAM

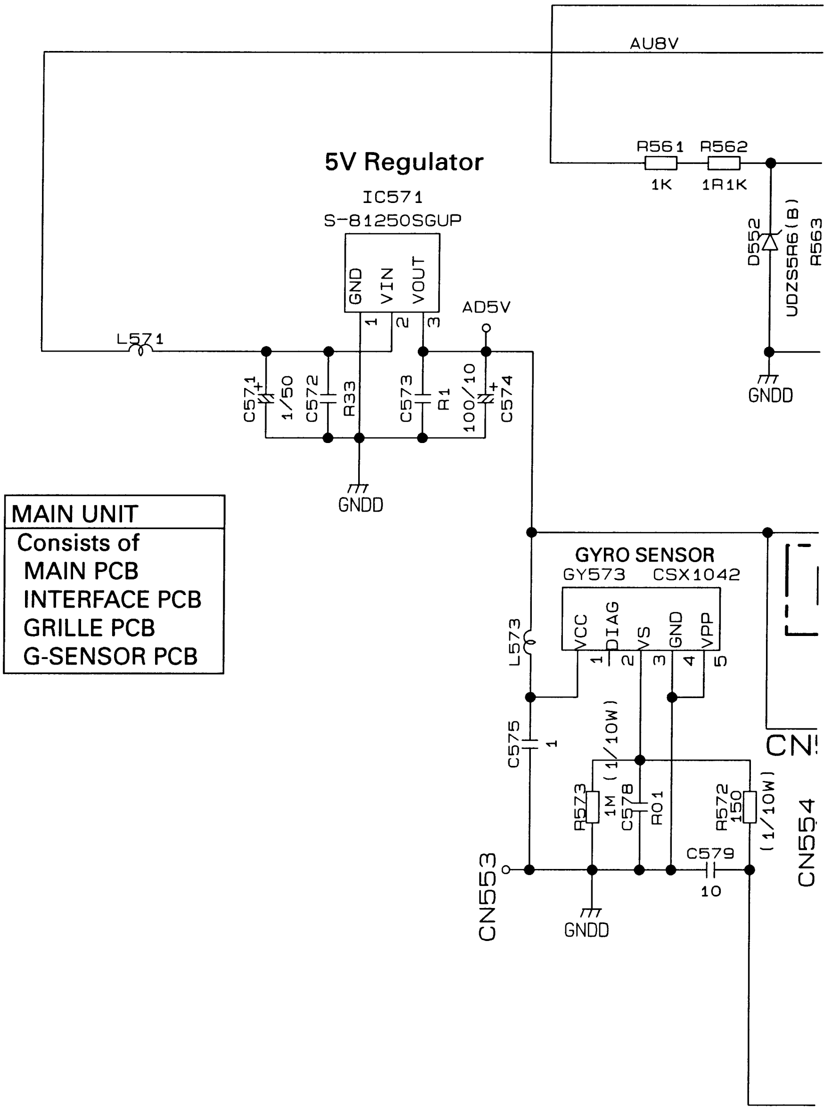
Note: When ordering service parts, be sure to refer to “EXPLODED VIEWS AND PARTS LIST” or “ELECTRICAL PARTS LIST”.


MAIN ASSY CPN1746
FAN MOTOR
CXM1192
CN1802
D
G-SENSOR PCB
CN556
CN555
B INT
CN5004 I/F to MAIN (30p
CN3901 MAIN to I/F (30p
DVD MECHANISM MODULE (MS2)
G 1/2 DVD CORE UNIT V(FRONT END)
G 2/2 DVD CORE UNIT V(BACK END)
CN1701
MS2 to MAIN (40pin)
CN3251
MAIN to MS2 (40pin)
CN1401
ATAPI-I/F (40pin)
CN2
ATAPI-I/F (50pin)
CN302
CC to MAIN (130pin)
CN3254
MAIN to CC (130pin)
E 1/6 CC UNIT(CPU,ASIC,SDRAM)
E 2/6 CC UNIT(ROM,SRAM,BUS-BUFFER)
E 3/6 CC UNIT(GRAPHIC)
E 4/6 CC UNIT(PC CARD)
E 5/6 CC UNIT(DSP,I/F CONNECOR)
E 6/6 CC UNIT(CC POWER SUPPLY)
CN901
PC-CARD_I/F (68pin)
CC UNIT
MAIN UNIT
A 1/5 MAIN PCB(RDS/GPS)
A 2/5 MAIN PCB(SYSCOM)
A 3/5 MAIN PCB(P/S)
A 4/5 MAIN PCB(VIDEO•CC C
A 5/5 MAIN PCB(AUDIO)
GRILLE ASSY
C GRILLE PCB


CUE TUNER
CN5002
CUE TUNER
and EXTENSION (10pin)
CN5005
SP
GUIDE SPEAKER
B INTERFACE PCB
CN5001
MIC
MIC ASSY
CPM1048
MAIN (30pin)
30
30
o I/F (30pin)
REMOTE
CONTROL
ASSY
CN504
GPS ANTENNA ASSY
CXB7600
F GPS UNIT
CN461
CN552
1
30
S/GPS)
SCOM)
)
EO•CC CORE I/F)
DIO)
CORD ASSY (POWER SUPPLY)
1KΩ
REVERSE-GEAR
SIGNAL INPUT
CAR SPEED
SIGNAL INPUT
PARKING BRAKE
7.5A
FUSE
+BATTERY
GND
MUTE
1KΩ
ILL
1KΩ
ACC
CN1801
CAR I/F (16pin)
1
16
CN3257
RGB CONNECTOR (26pin)
26
CONNECTION BOX
CXB7595
MAIN to GRILLE (6pin)
CN660
1
6
CN2851
GRILLE to MAIN (6pin)

3.3 MAIN PCB 1/5 (GPS)

A1/5 MAIN PCB(GPS)


AU8V
R561 R562
1K 1R1K
5V Regulator
IC571
S-81250SGUP
GND
VIN
VOUT
1
2
3
AD5V
L571
C571
1/50
C572
R33
C573
R1
100/10
C574
GNDD
D552
UDZS5R6(B)
R563
GNDD
GYRO SENSOR
GY573 CSX1042
VCC
DIAG
VS
GND
VPP
1
2
3
4
5
L573
C575
1
R573
1M (1/10W)
C578
R01
R572
150
(1/10W)
C579
10
CN553
GNDD
CN554
CN

MAIN UNIT

Consists of
MAIN PCB
INTERFACE PCB
GRILLE PCB
G-SENSOR PCB

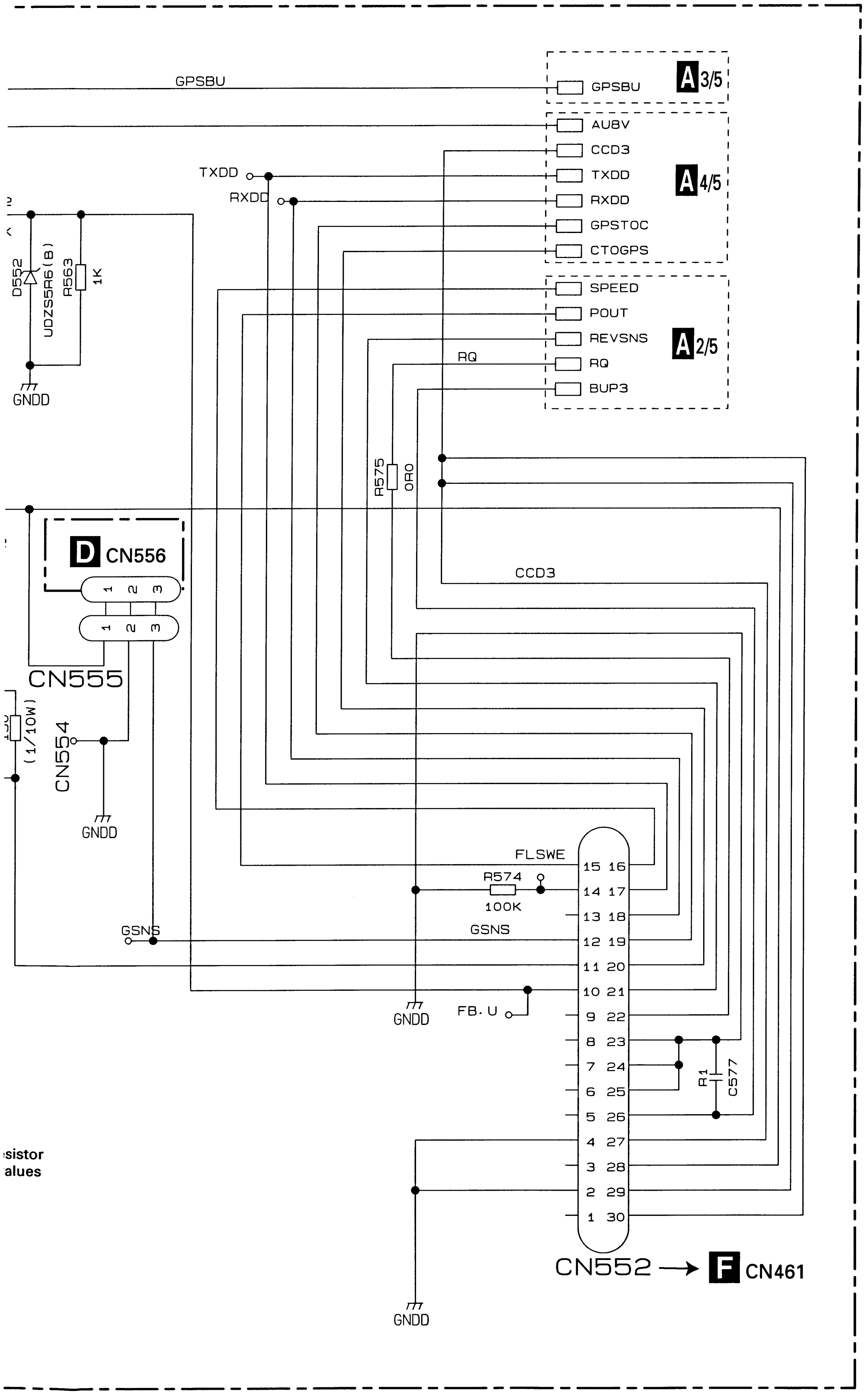
NOTE :

-▭- Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.

⊣⊢ Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

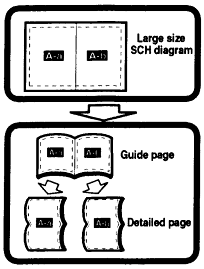
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

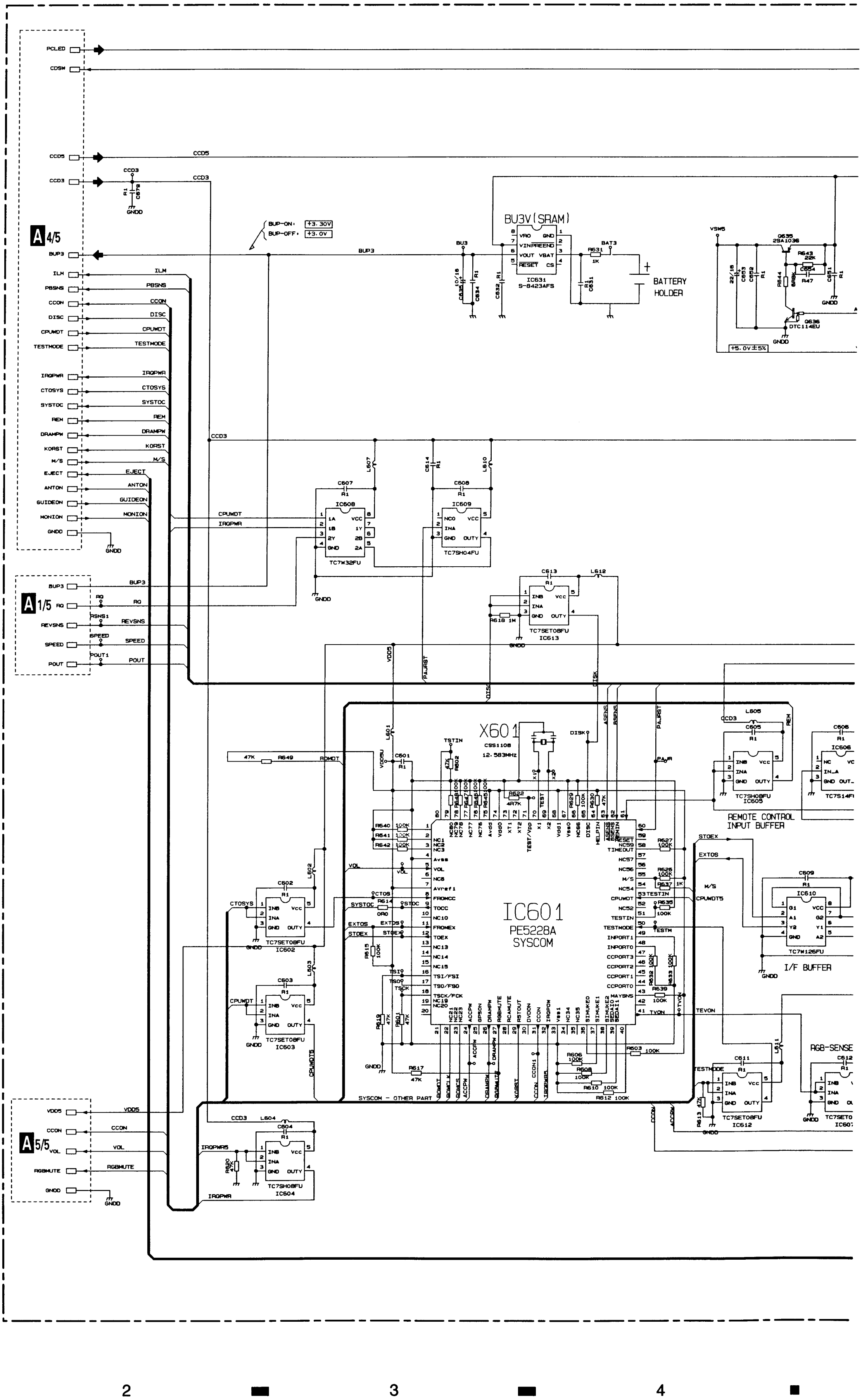

GPSBU
GPSBU
A 3/5
AU8V
CCD3
TXDD
RXDD
GPSTOC
CTOGPS
A 4/5
TXDD
RXDD
SPEED
POUT
REVSNS
RQ
BUP3
A 2/5
RQ
D552
UDZS5R6(B)
R563
1K
GNDD
R575
0R0
D CN556
1 2 3
1 2 3
CN555
(1/10W)
CN554
GNDD
CCD3
FLSWE
R574
100K
GSNS
GSNS
GNDD
FB.U
15 16
14 17
13 18
12 19
11 20
10 21
9 22
8 23
7 24
6 25
5 26
4 27
3 28
2 29
1 30
R1
C577
CN552 → F CN461
GNDD
sistor
alues

A 1/5

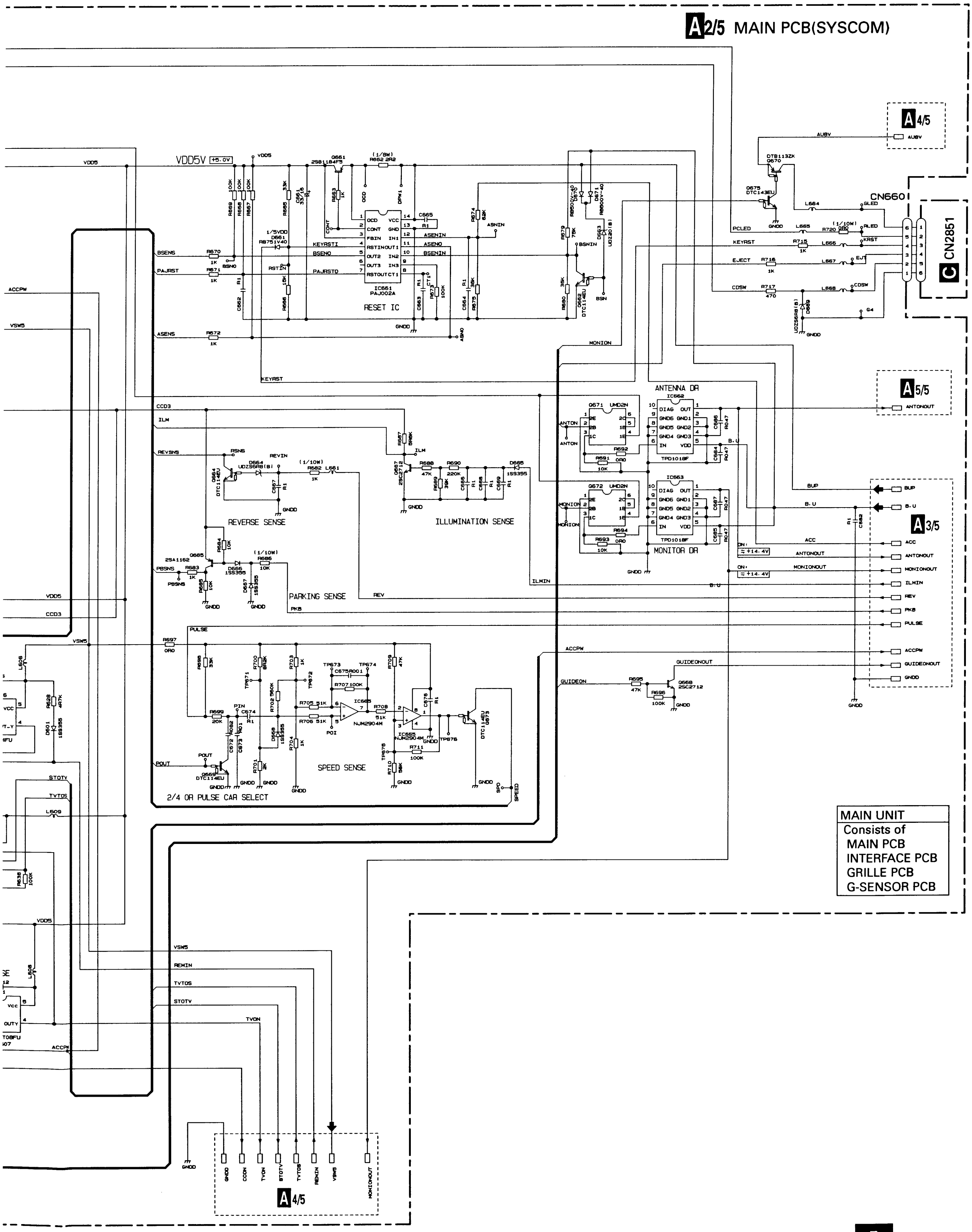
3.4 MAIN PCB 2/5 (SYSCOM)(GUIDE PAGE)

A-a 2/5

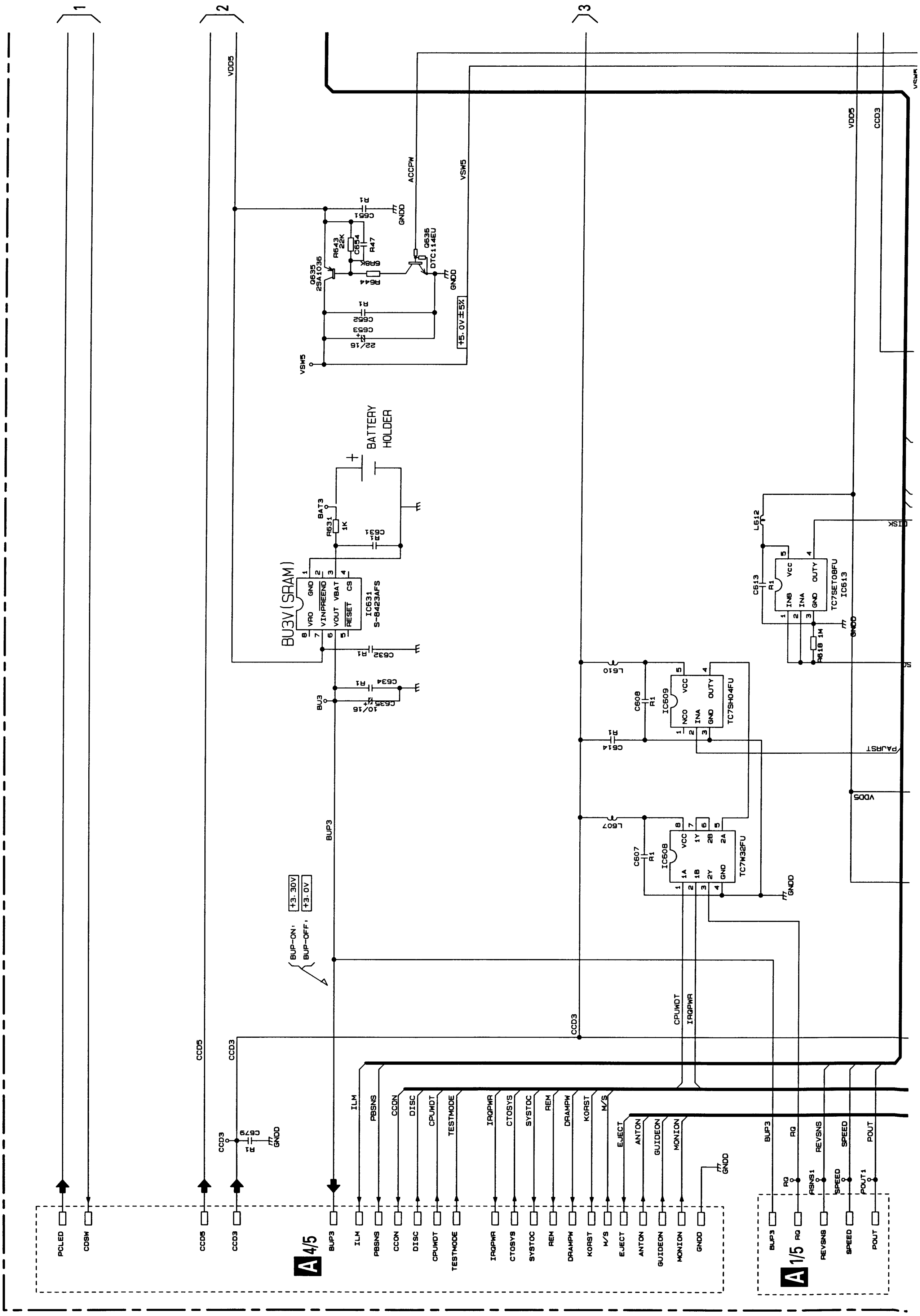

A-a
A-b
Large size SCH diagram
Guide page
Detailed page

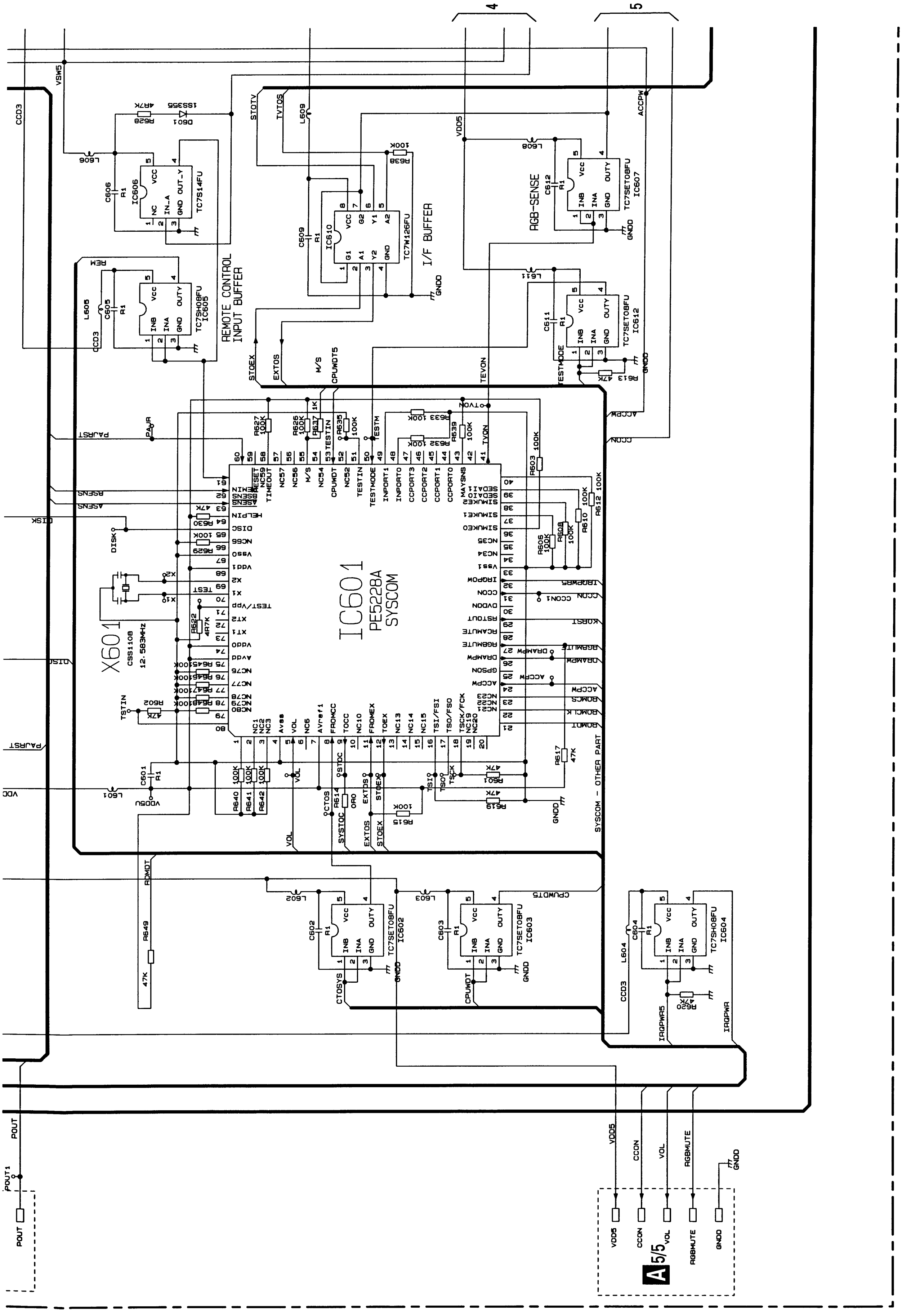

A 4/5
PCLED
CDSW
CCD5
CCD3
BUP3
ILM
PBSNS
CCON
DISC
CPUWDT
TESTMODE
IRQPWR
CTOSYS
SYSTOC
REM
DRAMPW
KORST
M/S
EJECT
ANTON
GUIDEON
MONION
GNDD
A 1/5
RQ
REVSNS
SPEED
POUT
A 5/5
VDD5
VOL
RGBMUTE
BUP-ON : +3.30V
BUP-OFF : +3.0V
BU3V (SRAM)
IC631
S-8423AFS
R631 1K
BAT3
BATTERY HOLDER
VSW5
Q635 2SA1036
R643 22K
Q636 DTC114EU
+5.0V±5%
IC608
TC7W32FU
IC609
TC7SH04FU
IC613
TC7SET08FU
R618 1M
X601
CSS1108
12.583MHz
IC601
PE5228A
SYSCOM
IC602
TC7SET08FU
IC603
TC7SET08FU
IC604
TC7SH08FU
IC605
TC7SH08FU
REMOTE CONTROL INPUT BUFFER
IC606
TC7S14FU
IC610
TC7W126FU
I/F BUFFER
IC612
TC7SET08FU
RGB-SENSE
IC607
R649 47K
R617 47K
SYSCOM - OTHER PART
EXTOS
STOEX
TEVON
TESTMODE

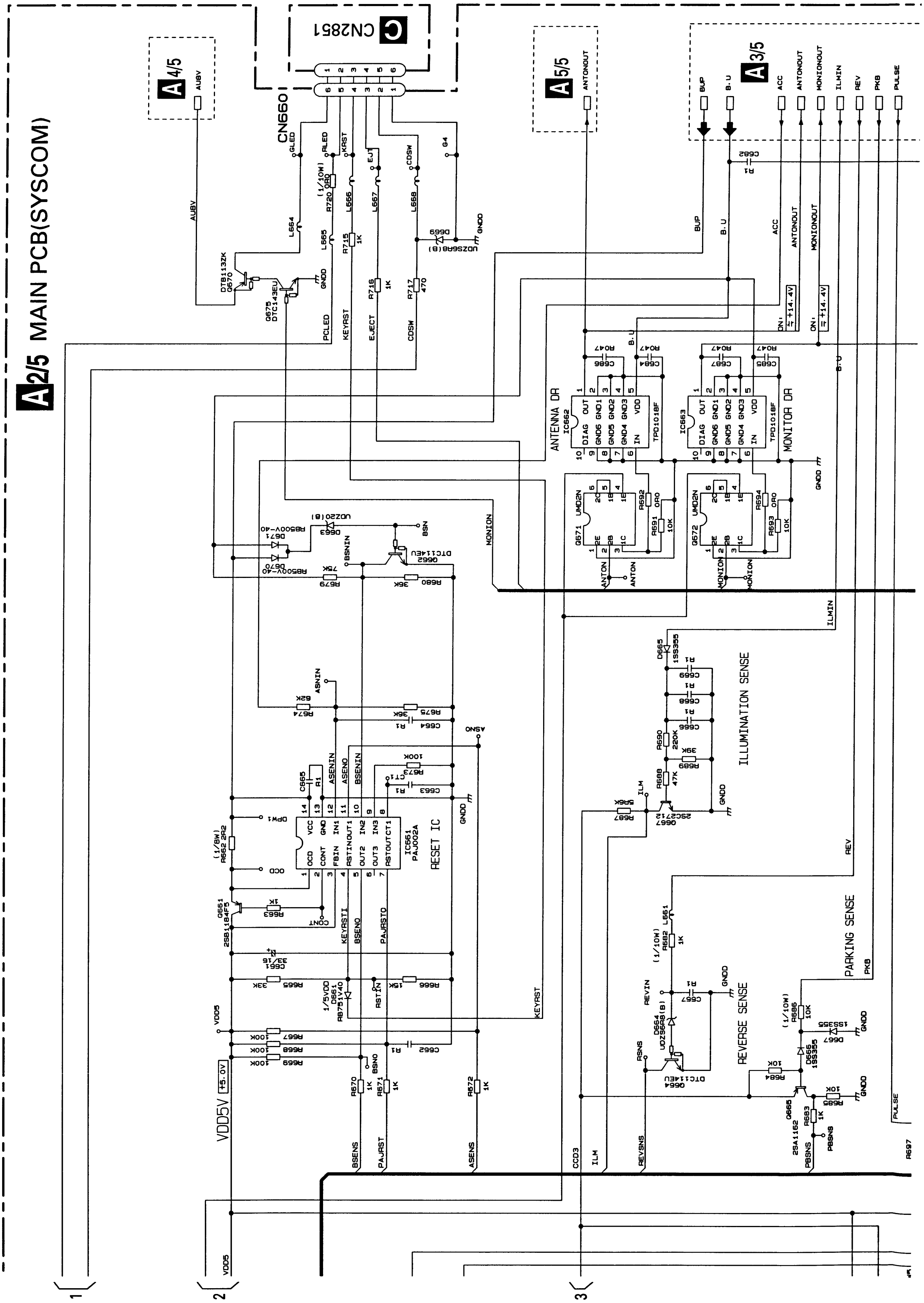
A-b 2/5

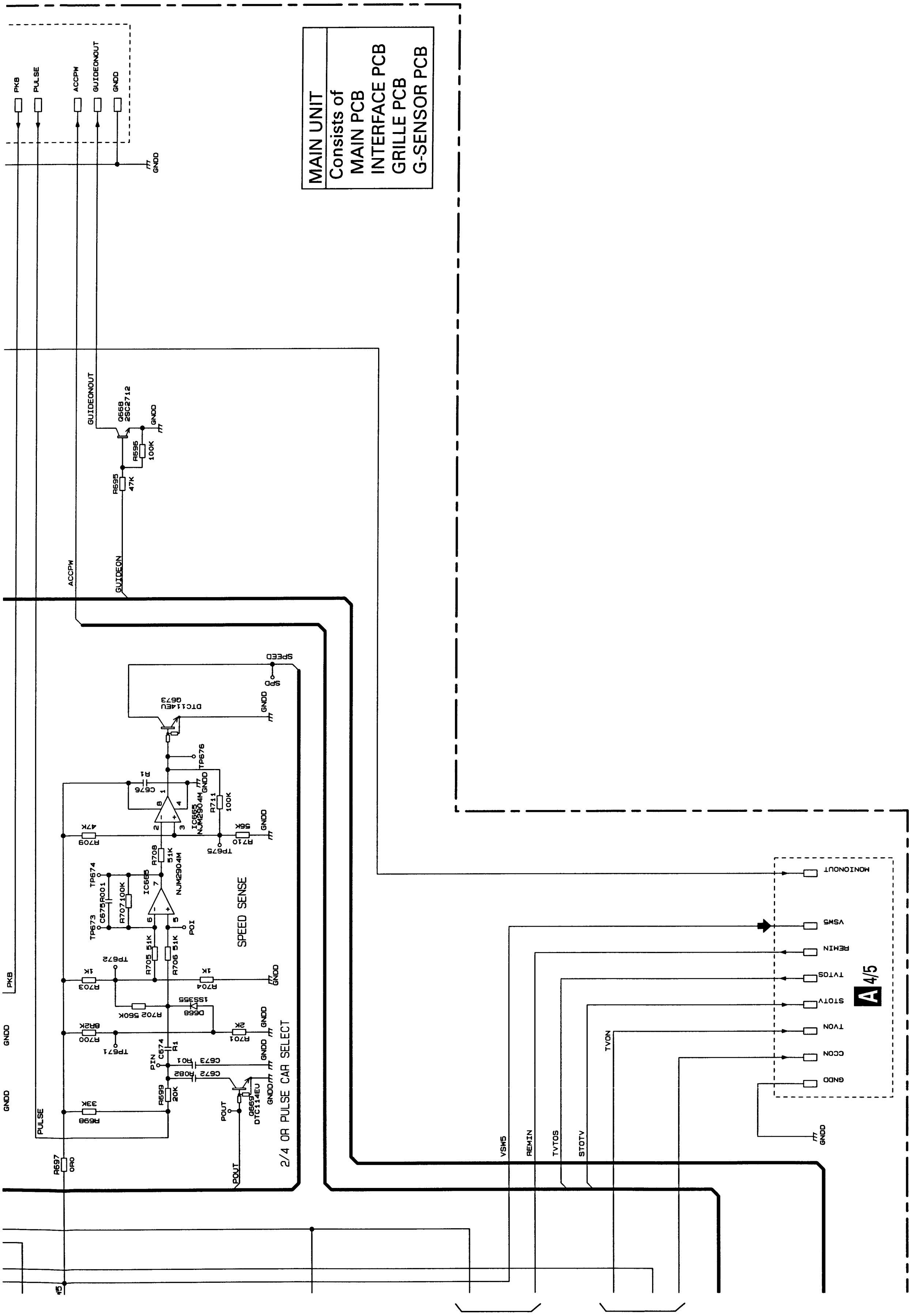

A 2/5 MAIN PCB(SYSCOM)
A 4/5
AUBV
VDD5
VDD5V +5.0V
Q661 2SB1184F5
(1/8W) R662 2R2
R669 100K
R668 100K
R667 100K
R665 33K
C661 33/16
R663 1K
OCD
DPM1
CONT
1/5VDD
D661 RB751V40
KEYRST1
BSENO
PAJRSTO
RSTIN
C665 R1
ASENIN
ASENO
BSENIN
IC661 PAJ002A
RESET IC
R674 62K
ASNIN
R678 39K
R675
C664 R1
R673 100K
BSENS
R670 1K
BSNO
PAJRST
R671 1K
ACCPW
VSW5
ASENS
R672 1K
GNDD
ASNO
KEYRST
RB500V-40
D671 RB500V-40
R679 75K
BSNIN
D663 UDZ20(B)
Q662 DTC114EU
R680 39K
BSN
MONION
DTB113ZK Q670
Q675 DTC143EU
L664
CN660
GLED
PCLED
L665 R720 0R0
(1/10W)
RLED
KEYRST
R715 1K
L666
KRST
EJECT
R716 1K
L667
EJT
CDSW
R717 470
L668
CDSW
G4
UDZS6R8(B) D669
GNDD
C CN2851
A 5/5
ANTONOUT
ANTENNA DR
IC662
Q671 UMD2N
ANTON
R692
R691 10K
TPD1018F
B.U
C686
R047
Q672 UMD2N
IC663
MONION
R693 10K
R694
TPD1018F
MONITOR DR
DIAG OUT
GND6 GND1
GND5 GND2
GND4 GND3
IN VDD
BUP
B.U
A 3/5
ACC
ON: +14.4V
ANTONOUT
MONIONOUT
ILMIN
REV
PKB
PULSE
ACCPW
GUIDEONOUT
GNDD
CCD3
ILM
REVSNS
RSNS
REVIN
D664 UDZS6R8(B)
(1/10W)
R682 1K
L661
Q664 DTC114EU
C657 R1
REVERSE SENSE
R687 680K
Q667 2SC2712
R688 47K
R690 220K
R689 39K
C666 R1
C668 R1
C669 R1
D665 1SS355
ILLUMINATION SENSE
R684 10K
2SA1162 Q665
PBSNS
R683 1K
D656 1SS355
(1/10W) R686 10K
R685 10K
D657 1SS355
PARKING SENSE
REV
PKB
VDD5
CCD3
VSW5
R697 0R0
PULSE
R698 33K
TP671
R700 680K
R703 1K
TP673
C675 R001
TP674
R709 47K
R702 560K
TP672
R707 100K
R705 51K
IC665
R706 51K
NJM2904M
R708 51K
C676 R1
IC665 NJM2904M
R711 100K
DTC114EU Q673
TP676
R699 20K
PIN
C674 R1
D658 1SS355
POI
C672 R1
C673 R1
R704 1K
POUT
Q669 DTC114EU
R701 1K
SPEED SENSE
R710 56K
SPO
SPEED
2/4 OR PULSE CAR SELECT
ACCPW
GUIDEONOUT
GUIDEON
R695 47K
Q668 2SC2712
R696 100K
D601 1SS355
R628 4R7K
L606
R638 100K
STOTV
TVTOS
L609
VDD5
L608
VCC
OUTY
VSW5
REMIN
TVTOS
STOTV
TVON
ACCPW
GNDD
GNDD
CCON
TVON
STOTV
TVTOS
REMIN
VSW5
MONIONOUT
A 4/5
A
B
C
D

MAIN UNIT
Consists of
MAIN PCB
INTERFACE PCB
GRILLE PCB
G-SENSOR PCB

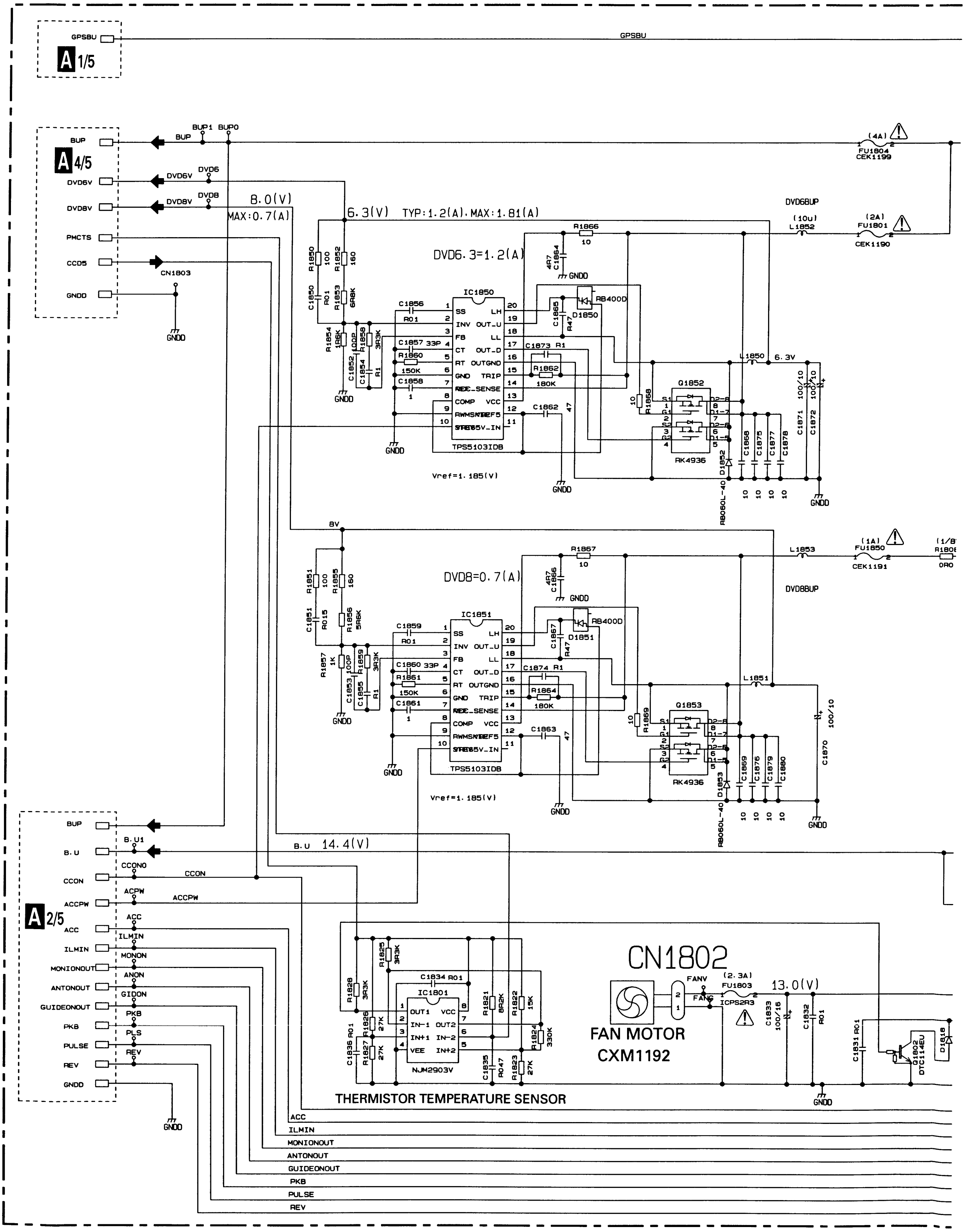

1
2
3
VDD5
ACCPW
VSW5
C651 R1
GNDD
R643 22K
C654 R47
6R8K
R644
Q635 2SA1036
Q636 DTC114EU
C652 R1
C653 22/16
+5.0V±5%
VSW5
BATTERY HOLDER
BAT3
R631 1K
C631 R1
BU3V(SRAM)
IC631 S-8423AFS
VRO GND VINPREEND VBAT VOUT CS RESET
C632 R1
C634 R1
C635 10/16
BU3
BUP3
BUP-ON: +3.30V
BUP-OFF: +3.0V
CCD5
CCD3
C679 R1
VDD5
CCD3
L612
C613 R1
IC613 TC7SET08FU
INB INA GND VCC OUTY
R618 1M
DISK
L610
C608 R1
IC609 TC7SH04FU
NCO INA GND VCC OUTY
C614 R1
PAJRST
VDD5
L607
C607 R1
IC608 TC7W32FU
1A 1B 2Y GND VCC 1Y 2B 2A
GNDD
CPUWDT
IRQPWR
ILM
PBSNS
CCON
DISC
CPUWDT
TESTMODE
IRQPWR
CTOSYS
SYSTOC
REM
DRAMPW
KORST
M/S
EJECT
ANTON
GUIDEON
MONION
BUP3
RQ
REVSNS
SPEED
POUT
RQ
RSNS1
SPEED
POUT1
PCLED
CDSW
CCD5
CCD3
A 4/5
BUP3
ILM
PBSNS
CCON
DISC
CPUWDT
TESTMODE
IRQPWR
CTOSYS
SYSTOC
REM
DRAMPW
KORST
M/S
EJECT
ANTON
GUIDEON
MONION
GNDD
BUP3
RQ
REVSNS
SPEED
POUT
A 1/5

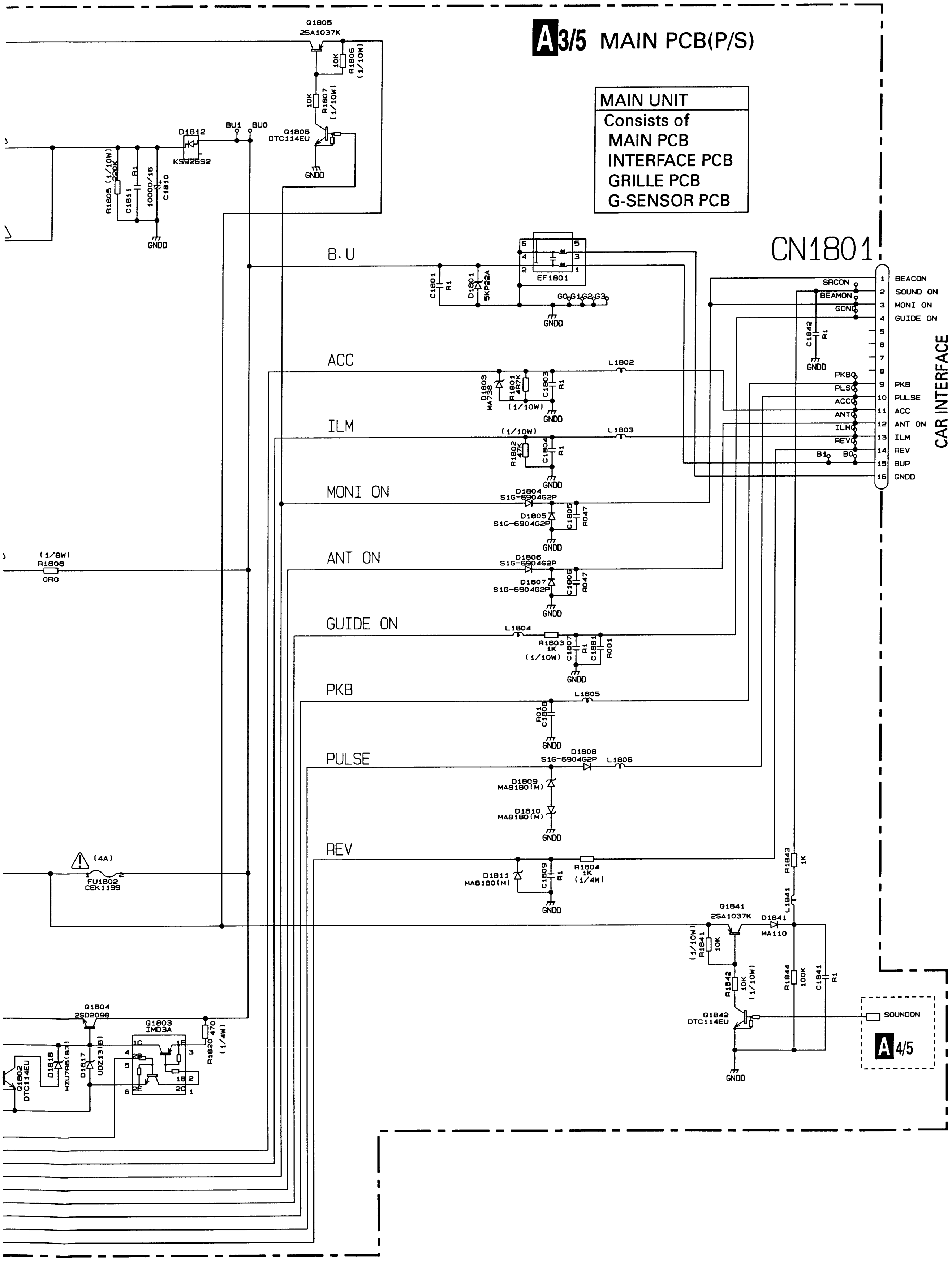

IC601
PE5228A
SYSCOM
X601
CSS1108
12.583MHz
IC602 TC7SET08FU
IC603 TC7SET08FU
IC604 TC7SH08FU
IC605 TC7SH08FU
REMOTE CONTROL INPUT BUFFER
IC606 TC7S14FU
IC607 TC7SET08FU
RGB-SENSE
IC610 TC7W126FU
I/F BUFFER
IC612 TC7SET08FU
SYSCOM - OTHER PART
4
5
VSW5
CCD3
VDD5
ACCPW
STOTV
TVTOS
REM
L605
L606
L608
L609
L611
D601 1SS355
R628 4R7K
R638 100K
STOEX
EXTOS
M/S
CPUWDT5
TEVON
TESTMODE
R613 47K
PAJRST
ASENS
BSENS
DISK
DISC
TSTIN
R602 47K
VDC
L601
C601
VDD5U
R640 100K
R641 100K
R642 100K
VOL
CTOS
R614
SYSTOC
EXTOS
STOEX
R615 100K
R601 47K
R619 47K
R617 47K
GNDD
ACCPW
CCON
IRQPWR5
KOBST
RGBMUTE
DRAMPW
BOMCS
BOMCLK
BOMDT
ROMDT
R649 47K
L602
L603
CPUWDT5
CTOSYS
CPUWDT
L604
R620 47K
IRQPWR5
IRQPWR
POUT
POUT1
VDD5
CCON
VOL
RGBMUTE
GNDD
A 5/5


A 2/5 MAIN PCB(SYSCOM)
C CN2851
CN660
A 4/5
AUBV
A 5/5
ANTONOUT
A 3/5
BUP
B.U
ACC
ANTONOUT
MONIONOUT
ILMIN
REV
PKB
PULSE
GLED
RLED
KRST
EJT
CDSW
G4
GNDD
R720 0R0 (1/10W)
L664
L665
L666
L667
L668
R715 1K
R716 1K
R717 470
D669 UDZS6R8(B)
Q670 DTB113ZK
Q675 DTC143EU
PCLED
KEYRST
EJECT
CDSW
ANTENNA DR
IC662 TPD1018F
MONITOR DR
IC663 TPD1018F
DIAG OUT GND6 GND1 GND5 GND2 GND4 GND3 IN VDD
C686 R047
C684 R047
C687 R047
C685 R047
ON: +14.4V
Q671 UMD2N
Q672 UMD2N
R691 10K
R692 0R0
R693 10K
R694 0R0
ANTON
MONION
ILMIN
D663 UDZ20(B)
D671 RB500V-40
D670 RB500V-40
Q662 DTC114EU
BSN
BSNIN
R679 75K
R680 36K
R674 82K
ASNIN
R675 36K
C664 R1
ASNO
IC661 PAJ002A
RESET IC
OCD VCC CONT GND FBIN IN1 RSTINOUT1 IN2 OUT2 IN3 OUT3 RSTOUTCT1
C665 R1
ASENIN
ASENO
BSENIN
R673 100K
CT1
C663 R1
OPW1
OCD
R662 2R2 (1/8W)
Q661 2SB1184F5
R663 1K
CONT
KEYRSTI
BSENO
PAJRSTO
C661 33/16
R665 33K
R666 15K
D661 RB751V40 1/5VDD
RSTIN
VDD5
R667 100K
R668 100K
R669 100K
C662 R1
VDD5V +5.0V
R670 1K
BSNO
R671 1K
R672 1K
BSENS
PAJRST
ASENS
KEYRST
CCD3
ILM
REVSNS
D665 1SS355
C669 R1
C668 R1
C666 R1
R690 220K
R689 39K
R688 47K
ILLUMINATION SENSE
R687 5R6K
Q667 2SC2712
L661
R682 1K (1/10W)
REVIN
C667 R1
D664 UDZS6R8(B)
RSNS
Q664 DTC114EU
REVERSE SENSE
PARKING SENSE
R686 10K (1/10W)
D667 1SS355
D666 1SS355
R684 10K
R685 10K
Q665 2SA1162
R683 1K
PBSNS
R687
1
2
3


MAIN UNIT
Consists of
MAIN PCB
INTERFACE PCB
GRILLE PCB
G-SENSOR PCB
PKB
PULSE
ACCPW
GUIDEONOUT
GNDD
Q668
2SC2712
R696
100K
R695
47K
GUIDEON
SPEED
SPD
Q673
DTC114EU
TP676
C676
R1
IC665
NJM2904M
R711
100K
R709
47K
R710
56K
TP675
R708
51K
TP674
C675
R001
R707
100K
TP673
R705 51K
R706 51K
POI
SPEED SENSE
TP672
R703
1K
R704
1K
D668
1SS355
R702 560K
R700
8R2K
R701
2K
TP671
C674
PIN
C673
R01
C672
R082
R699
20K
Q669
DTC114EU
POUT
R698
33K
R697
0R0
2/4 OR PULSE CAR SELECT
MONIONOUT
VSW5
REMIN
TVTOS
STOTV
TVON
CCON
A 4/5
4
5
A
B
C
D

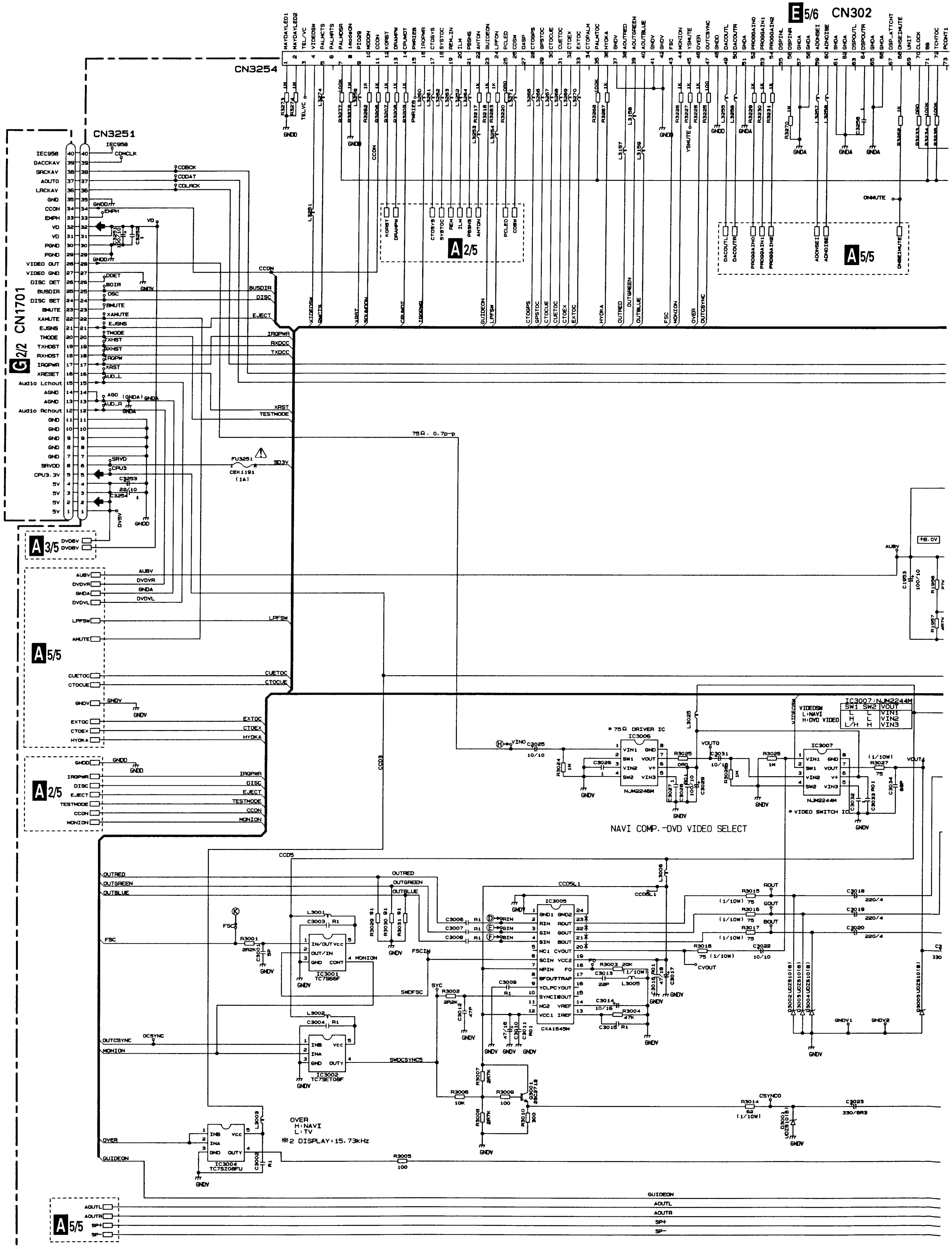
3.5 MAIN PCB 3/5 (P/S)


A
B
C
D
GPSBU
A 1/5
BUP
A 4/5
DVD6V
DVD8V
PMCTS
CCD5
GNDD
CN1803
BUP1 BUP0
DVD6
DVD8
8.0(V)
MAX:0.7(A)
6.3(V) TYP:1.2(A), MAX:1.81(A)
DVD6.3=1.2(A)
(4A)
FU1804
CEK1199
DVD6BUP
(10u)
L1852
(2A)
FU1801
CEK1190
R1866
10
C1864
4R7
IC1850
TPS5103IDB
SS
INV
FB
CT
RT
GND
REF_SENSE
COMP
PWMSKIP
STBY5
LH
OUT_U
LL
OUT_D
OUTGND
TRIP
VCC
REF5
5V_IN
R1850
100
R1852
160
C1850
R01
R1853
6R8K
R1854
1R6K
C1852
C1854
100P
R1858
3R3K
R1
C1856
C1857 33P
R1860
150K
C1858
1
C1865
R47
RB400D
D1850
C1873 R1
R1862
180K
C1862
47
Vref=1.185(V)
L1850
6.3V
R1868
10
Q1852
RK4936
D1852
RB060L-40
C1868
C1875
C1877
C1878
C1871
C1872
100/10
8V
R1867
10
(1A)
FU1850
CEK1191
L1853
(1/8)
R1808
0R0
DVD8BUP
DVD8=0.7(A)
C1866
4R7
R1851
100
R1855
160
C1851
R015
R1856
5R6K
R1857
1K
C1853
C1855
100P
R1859
3R3K
IC1851
TPS5103IDB
C1859
C1860 33P
R1861
150K
C1861
C1867
R47
D1851
C1874 R1
R1864
180K
C1863
47
L1851
R1869
10
Q1853
RK4936
D1853
RB060L-40
C1869
C1876
C1879
C1880
C1870
100/10
A 2/5
BUP
B.U
B.U1
CCON
CCON0
ACCPW
ACPW
ACC
ILMIN
MONIONOUT
MONON
ANTONOUT
ANON
GUIDEONOUT
GIDON
PKB
PULSE
PLS
REV
GNDD
B.U 14.4(V)
CCON
ACCPW
IC1801
NJM2903V
OUT1
IN-1
IN+1
VEE
VCC
OUT2
IN-2
IN+2
C1834 R01
R1825
3R3K
R1828
3R3K
R1826
27K
R1827
27K
C1836 R01
C1835
R047
R1821
8R2K
R1822
15K
R1824
330K
R1823
27K
THERMISTOR TEMPERATURE SENSOR
CN1802
FAN MOTOR
CXM1192
FANV
FANG
(2.3A)
FU1803
ICPS2R3
13.0(V)
C1833
100/16
C1832
R01
C1831 R01
Q1802
DTC114EU
D18
ACC
ILMIN
MONIONOUT
ANTONOUT
GUIDEONOUT
PKB
PULSE
REV

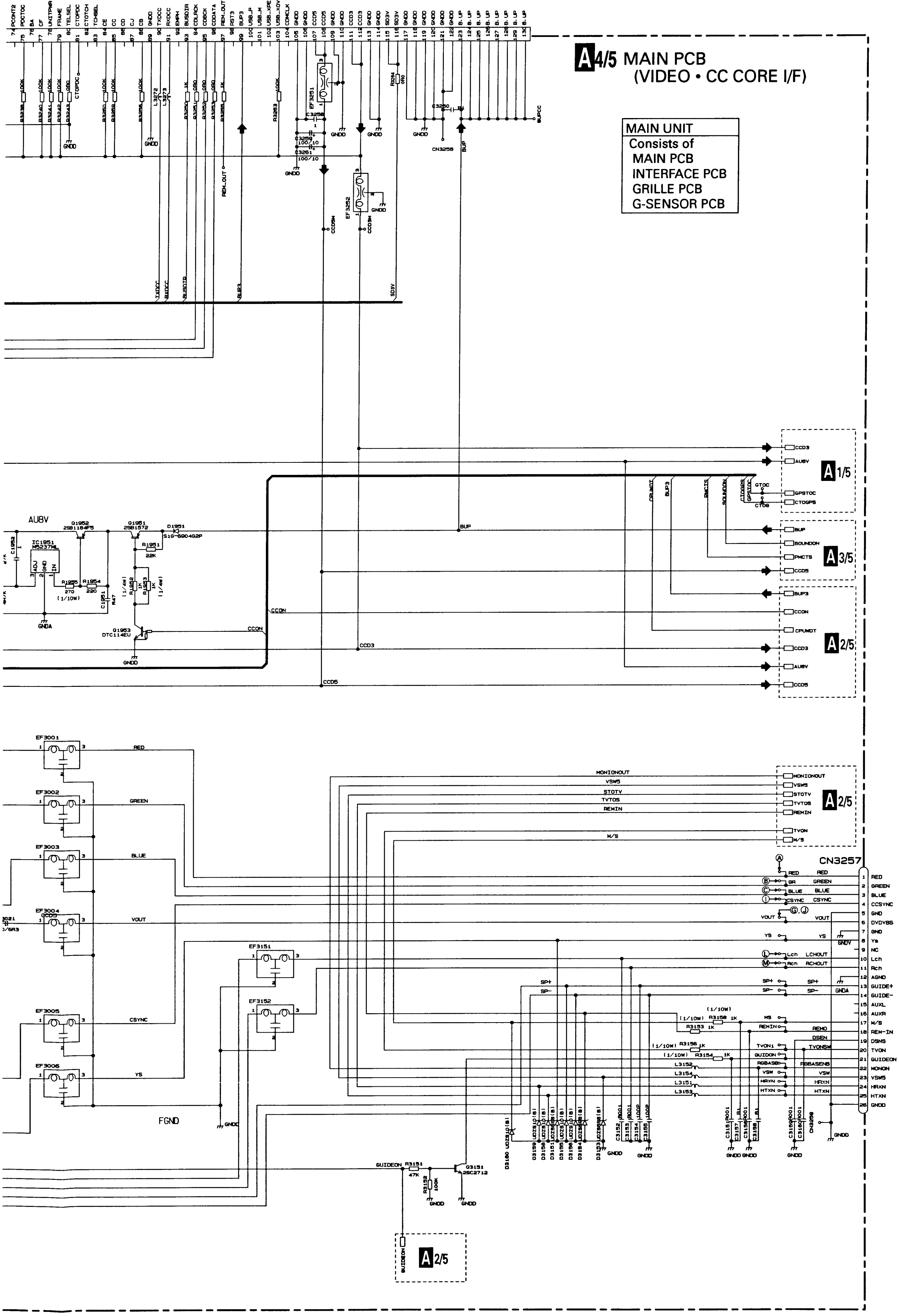

A3/5 MAIN PCB(P/S)
MAIN UNIT
Consists of
MAIN PCB
INTERFACE PCB
GRILLE PCB
G-SENSOR PCB
CN1801
CAR INTERFACE
1 BEACON
2 SOUND ON
3 MONI ON
4 GUIDE ON
5
6
7
8
9 PKB
10 PULSE
11 ACC
12 ANT ON
13 ILM
14 REV
15 BUP
16 GNDD
SRCON
BEAMON
GONO
PKBO
PLSO
ACCO
ANTO
ILMO
REVO
B1
B0
B.U
ACC
ILM
MONI ON
ANT ON
GUIDE ON
PKB
PULSE
REV
Q1805 2SA1037K
R1806 10K (1/10W)
R1807 10K (1/10W)
Q1806 DTC114EU
BU1
BU0
D1812 KS926S2
R1805 (1/10W) 220K
C1811 R1
C1810 10000/16
EF1801
G0 G1 G2 G3
C1801 R1
D1801 5KP22A
L1802
D1803 MA738
R1801 4R7K (1/10W)
C1803 R1
(1/10W)
L1803
R1802 47K
C1804 R1
D1804 S1G-6904G2P
D1805 S1G-6904G2P
C1805 R047
D1806 S1G-6904G2P
D1807 S1G-6904G2P
C1806 R047
L1804
R1803 1K (1/10W)
C1807 R1
C1881 R001
L1805
R01 C1808
D1808 S1G-6904G2P
L1806
D1809 MA8180(M)
D1810 MA8180(M)
D1811 MA8180(M)
C1809 R1
R1804 1K (1/4W)
C1842 R1
R1843 1K
L1841
Q1841 2SA1037K
D1841 MA110
R1841 (1/10W) 10K
R1842 10K (1/10W)
R1844 100K
C1841 R1
Q1842 DTC114EU
SOUNDON
A4/5
(1/8W) R1808 0R0
(4A) FU1802 CEK1199
Q1804 2SD2098
Q1803 IMD3A
R1820 470 (1/4W)
Q1802 DTC114EU
D1818 HZU7R5(B1)
D1817 UDZ13(B)
GNDD

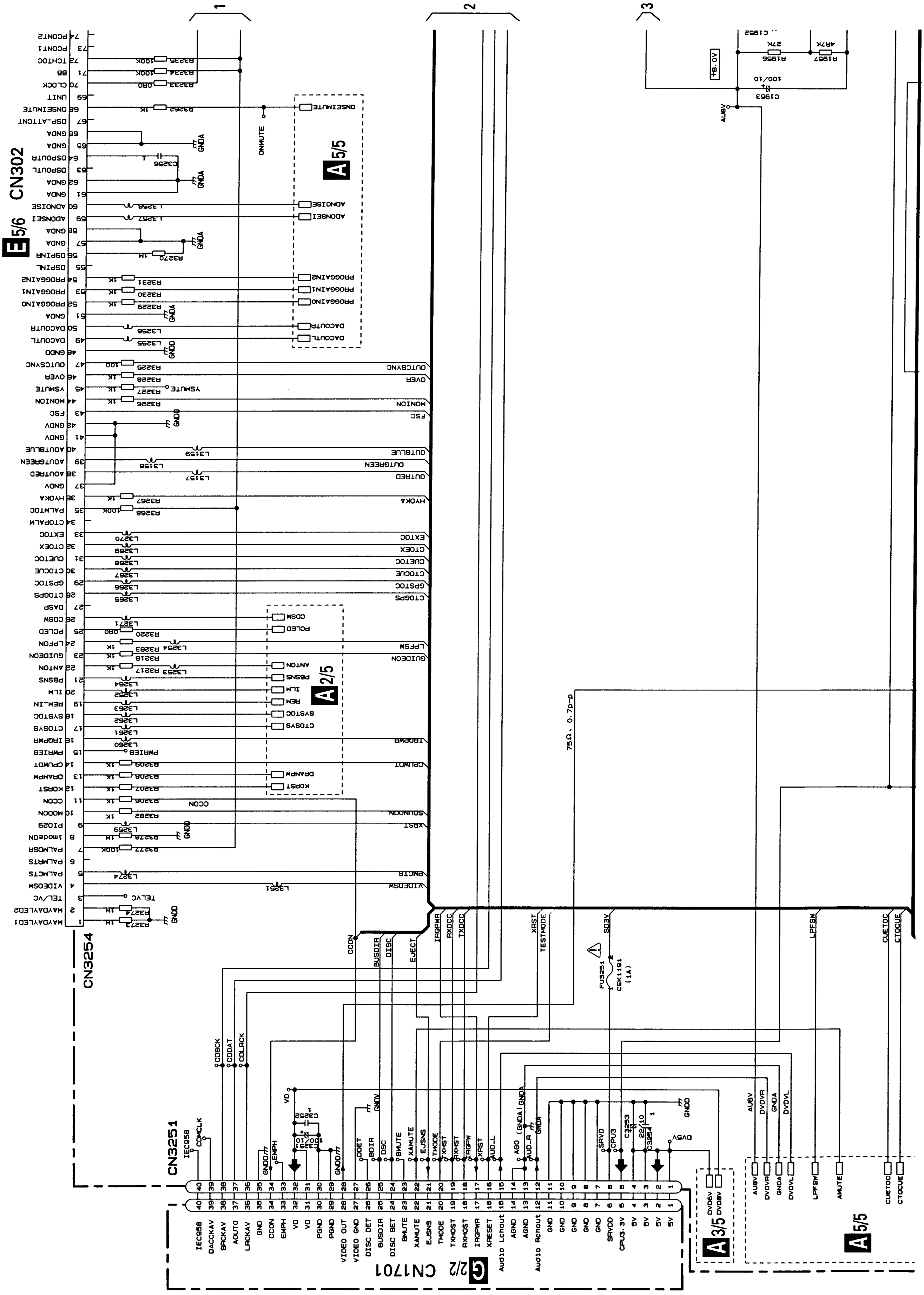
3.6 MAIN PCB 4/5 (VIDEO•CC CORE I/F)(GUIDE PAGE)

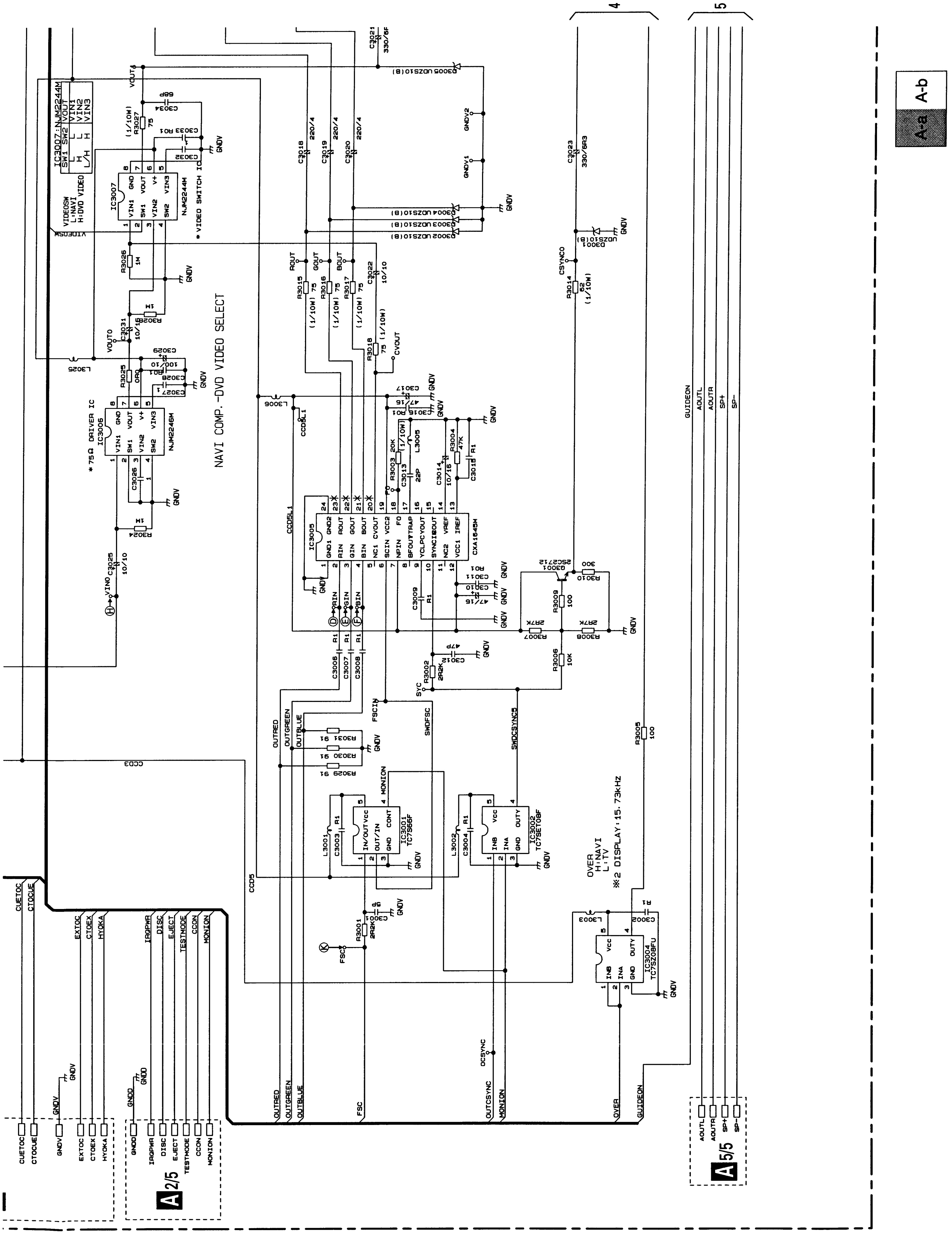
A-a 4/5

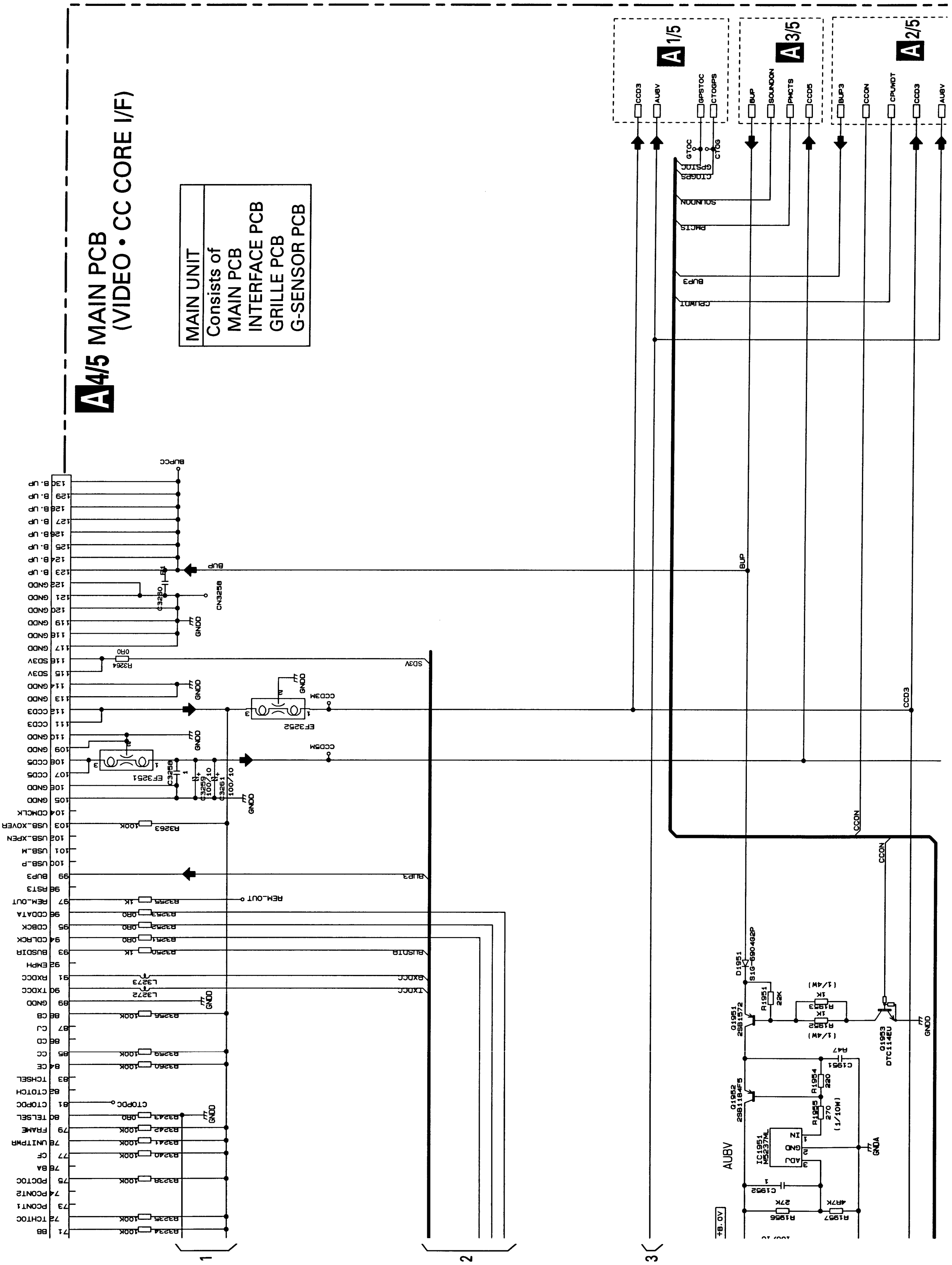

E 5/6 CN302
CN3254
CN3251
CN1701
G 2/2
A 2/5
A 5/5
A 3/5
A 2/5
A 5/5
A 5/5
FU3251
CEK1191
(1A)
75Ω 0.7p-p
IC3007:NJM2244M
VIDEOSW
L:NAVI
H:DVD VIDEO
SW1 SW2 VOUT
L L VIN1
H L VIN2
L/H H VIN3
*75Ω DRIVER IC
IC3006
NJM2246M
IC3007
NJM2244M
*VIDEO SWITCH IC
NAVI COMP.-DVD VIDEO SELECT
IC3005
CXA1645M
IC3001
TC7S66F
IC3002
TC7SET08F
IC3004
TC7SZ08FU
OVER
H:NAVI
L:TV
※2 DISPLAY:15.73kHz
+8.0V

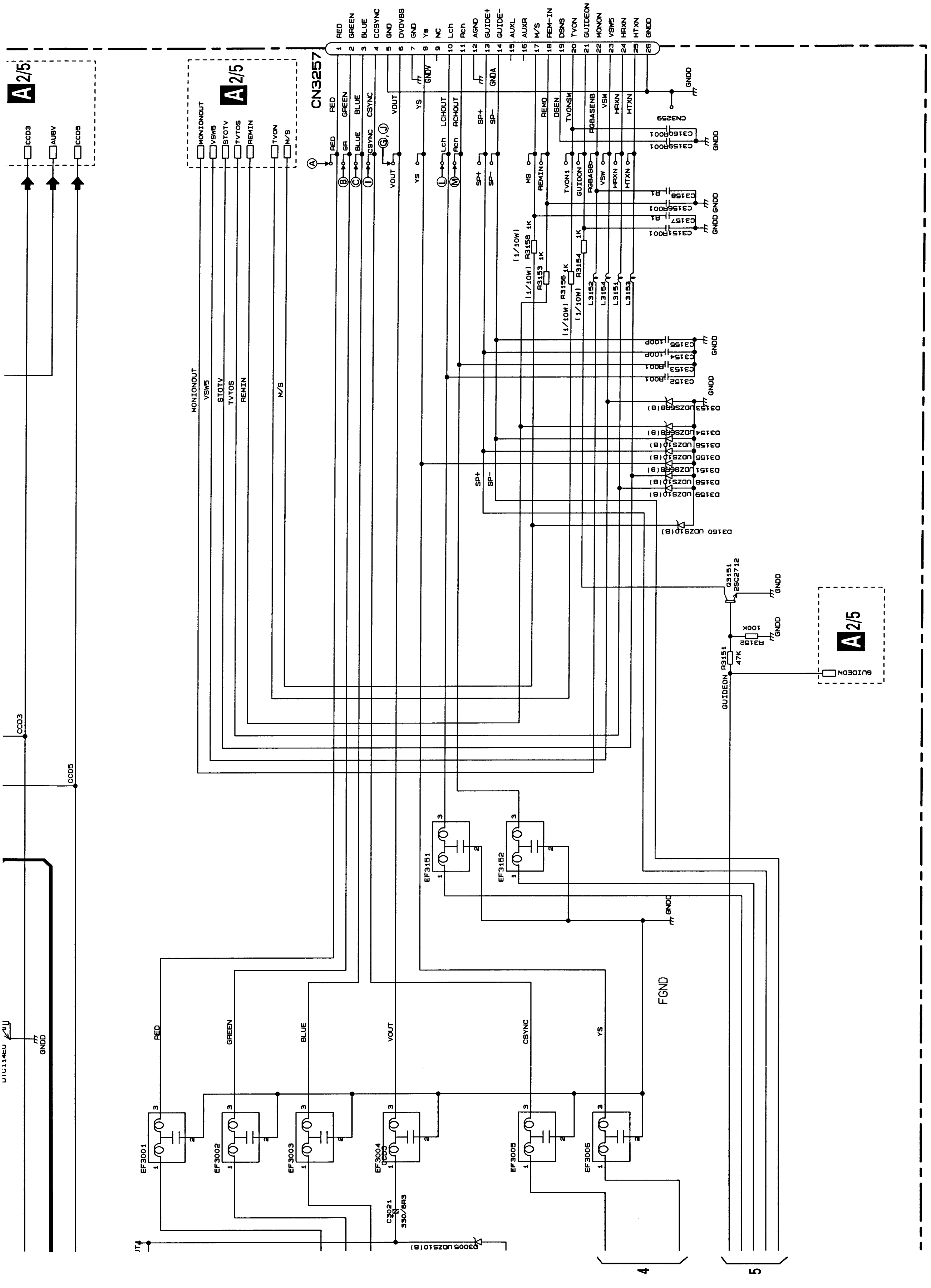
A-b 4/5


A 4/5 MAIN PCB
(VIDEO • CC CORE I/F)
MAIN UNIT
Consists of
MAIN PCB
INTERFACE PCB
GRILLE PCB
G-SENSOR PCB
A 1/5
A 3/5
A 2/5
CN3257
CORD ASSY
AU8V
IC1951
M5237ML
Q1952
2SB1184F5
Q1951
2SB1572
D1951
Q1953
DTC114EU
EF3001
EF3002
EF3003
EF3004
EF3005
EF3006
EF3151
EF3152
RED
GREEN
BLUE
VOUT
CSYNC
YS
FGND
GUIDEON
R3151
47K
R3152
100K
Q3151
2SC2712
CCD3
AU8V
GPSTOC
CTOGPS
BUP
SOUNDON
PHCTS
CCD5
BUP3
CCON
CPUMUT
MONIONOUT
VSW5
STOTV
TVTOS
REMIN
TVON
M/S
RED
GREEN
BLUE
CCSYNC
GND
DVDVBS
GND
YS
NC
Lch
Rch
AGND
GUIDE+
GUIDE-
AUXL
AUXR
M/S
REM-IN
DSNS
TVON
GUIDEON
MONON
VSW5
HRXN
HTXN
GND
GNDD
GNDA
BUPCC


CN302
E 5/6
A 5/5
A 2/5
CN3254
CN3251
CN1701
G 2/2
A 3/5
A 5/5
75Ω, 0.7p-p
FU3251
CEK1191
(1A)
+8.0V
AUBV
ONMUTE
ONSEIMUTE
ADNOISE
ADNOSEI
PROGGAIN2
PROGGAIN1
PROGGAIN0
DACOUTR
DACOUTL
OUTCSYNC
OVER
MONION
FSC
OUTBLUE
OUTGREEN
OUTRED
HYOKA
EXTOC
CTOEX
CUETOC
CTOCUE
GPSTOC
CTOGPS
CDSW
PCLED
LPFSW
GUIDEON
ANTON
PBSNS
ILM
REM
SYSTOC
CTOSYS
IRQPWR
PWRIEB
CPUWDT
DRAMPW
KORST
CCON
SOUNDON
XRST
PMCTS
VIDEOSW
TELVC
YSMUTE
CDBCK
CDDAT
CDLRCK
IEC958
CDMCLK
BUSDIR
DSC
EJECT
IRQPWR
RXDCC
TXDCC
TESTMODE
SD3V
LPFSW
CUETOC
CTOCUE
DVD6V
DVD8V
AUBV
DVDVR
GNDA
DVDVL
LPFSW
AMUTE
IEC958
DACCKAV
SRCKAV
AOUTO
LRCKAV
GND
CCON
EMPH
VD
VD
PGND
PGND
VIDEO OUT
VIDEO GND
DISC DET
BUSDIR
DISC SET
8MUTE
XAMUTE
EJSNS
TMODE
TXHOST
RXHOST
IRQPWR
XRESET
Audio Lchout
AGND
AGND
Audio Rchout
GND
GND
GND
GND
GND
SRVDD
CPU3.3V
5V
5V
5V
5V
A-a
A-b


A-b
A-a
A
B
C
D
IC3007:NJM2244M
SW1 SW2 VOUT
L L VIN1
H L VIN2
L/H H VIN3
VIDEOSW
L:NAVI
H:DVD VIDEO
IC3007
NJM2244M
* VIDEO SWITCH IC
IC3006
NJM2246M
* 75Ω DRIVER IC
NAVI COMP.-DVD VIDEO SELECT
IC3005
CXA1645M
Q3001
2SC2712
IC3001
TC7S66F
IC3002
TC7SET08F
IC3004
TC7S08FU
OVER
H:NAVI
L:TV
※2 DISPLAY:15.73kHz
VOUT0
VOUTO
VINO
CVOUT
ROUT
GOUT
BOUT
CSYNCO
RIN
GIN
BIN
FSCIN
SYC
SWDFSC
SWDCSYNC5
MONION
OUTRED
OUTGREEN
OUTBLUE
CCD3
CCD5
CCD5L1
FSC
OCSYNC
OUTCSYNC
GUIDEON
AOUTL
AOUTR
SP+
SP-
CUETOC
CTOCUE
GNDV
EXTOC
CTOEX
HYOKA
GNDD
IRQPWR
DISC
EJECT
TESTMODE
CCON
MONION
OVER
A 2/5
A 5/5
4
5

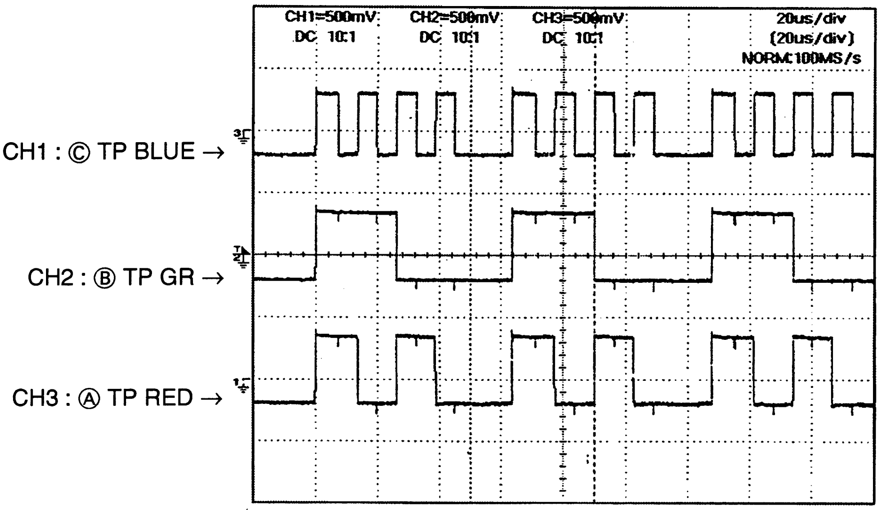

A 4/5 MAIN PCB
(VIDEO • CC CORE I/F)
MAIN UNIT
Consists of
MAIN PCB
INTERFACE PCB
GRILLE PCB
G-SENSOR PCB
A 1/5
A 3/5
A 2/5
CCD3
AUBV
GPSTOC
CTOGPS
BUP
SOUNDON
PMCTS
CCD5
BUP3
CCON
CPUWDT
BUPCC
CN3258
SD3V
CCD3M
CCD5M
EF3251
EF3252
REM-OUT
BUSDIR
RXDCC
TXDCC
CTOPDC
D1951
Q1951
Q1952
Q1953
IC1951
GNDD
GNDA
1
2
3


CN3257
1 RED
2 GREEN
3 BLUE
4 CCSYNC
5 GND
6 DVDVBS
7 GND
8 Ys
9 NC
10 Lch
11 Rch
12 AGND
13 GUIDE+
14 GUIDE-
15 AUXL
16 AUXR
17 M/S
18 REM-IN
19 DSNS
20 TVON
21 GUIDEON
22 MONON
23 VSW5
24 HRXN
25 HTXN
26 GNDD
A 2/5
CCD3
AUBV
CCD5
MONIONOUT
VSW5
STOTV
TVTOS
REMIN
TVON
M/S
GNDV
GNDA
GNDD
CN3259
C3160 R001
C3159 R001
C3158 B1
C3156 R001
C3157 B1
C3151 R001
R3158 1K
R3153 1K
R3156 1K
R3154 1K
(1/10W)
L3152
L3154
L3151
L3153
C3155 100P
C3154 100P
C3153 B001
C3152 B001
D3153 UDZS6R8(B)
D3154 UDZS6R8(B)
D3156 UDZS10(B)
D3155 UDZS10(B)
D3151 UDZS6R8(B)
D3158 UDZS10(B)
D3159 UDZS10(B)
D3160 UDZS10(B)
Q3151 2SC2712
R3152 100K
R3151 47K
GUIDEON
EF3151
EF3152
FGND
EF3001
EF3002
EF3003
EF3004
EF3005
EF3006
RED
GREEN
BLUE
VOUT
CSYNC
YS
SP+
SP-
LCHOUT
RCHOUT
C3021 330/6R3
D3005 UDZS10(B)
4
5

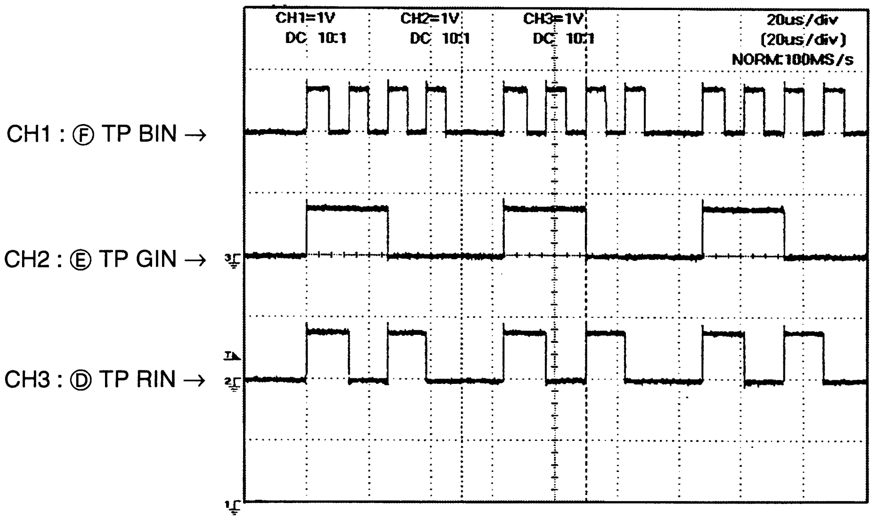
Note: The encircled numbers denote measuring pointes in the circuit diagram.

● Waveforms

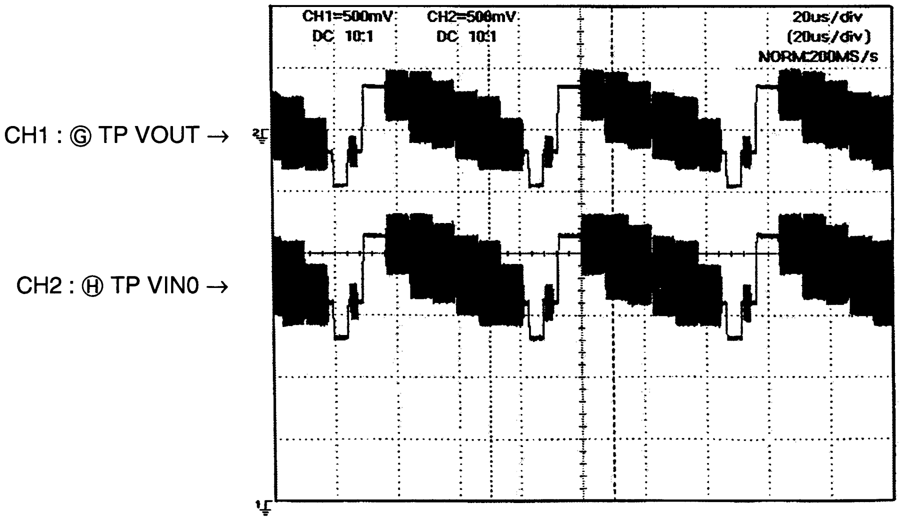
- Navigation RGB Color Bar Signal



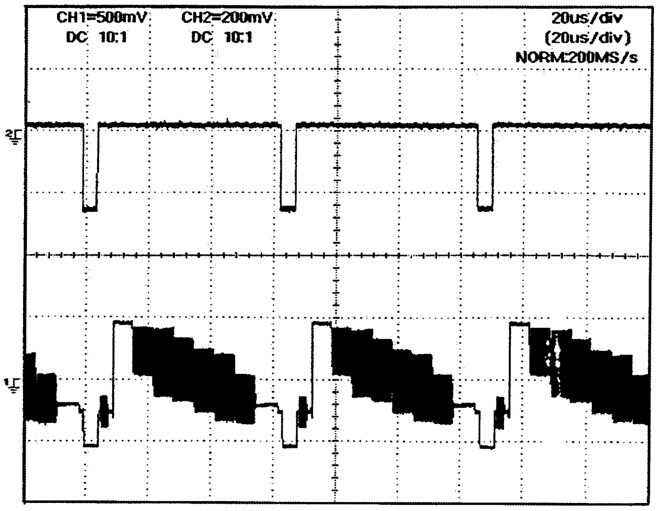
- Navigation RGB Color Bar Signal



- DVD Video Color Bar Signal



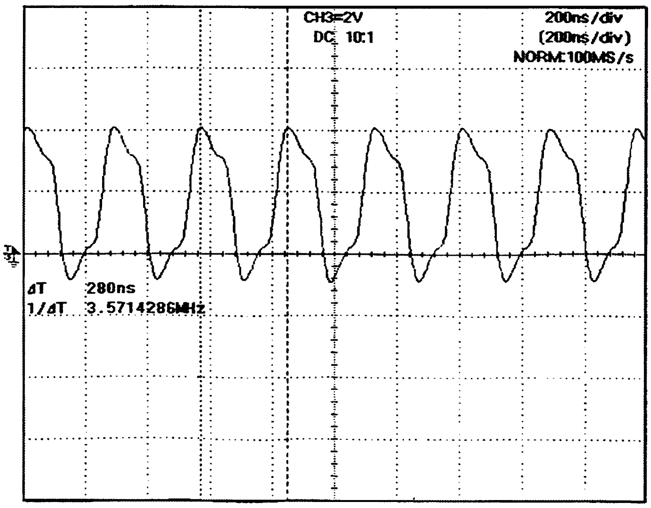
- DVD Video Color Bar Signal



CH1 : Ⓘ TP CSYNC →

CH2 : Ⓙ TP VOUT →

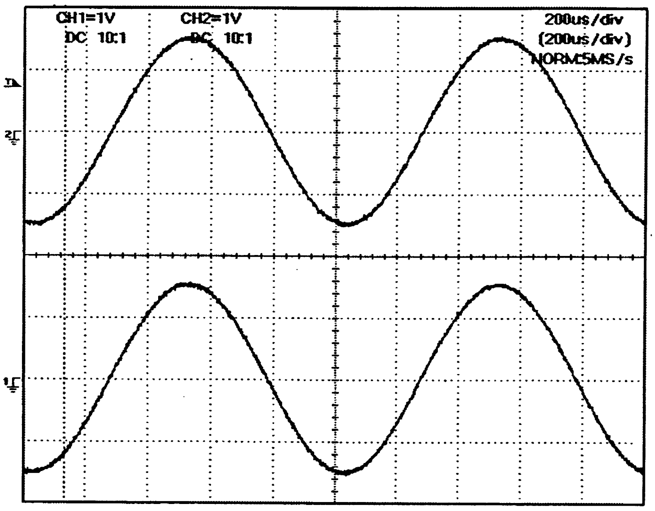
- DVD Video Color Bar Signal



CH1 : Ⓚ TP FSC →

- DVD Video : 1kHz, 0dB (48kHz and 16bit Sampling)

* The A1 Disk is used.

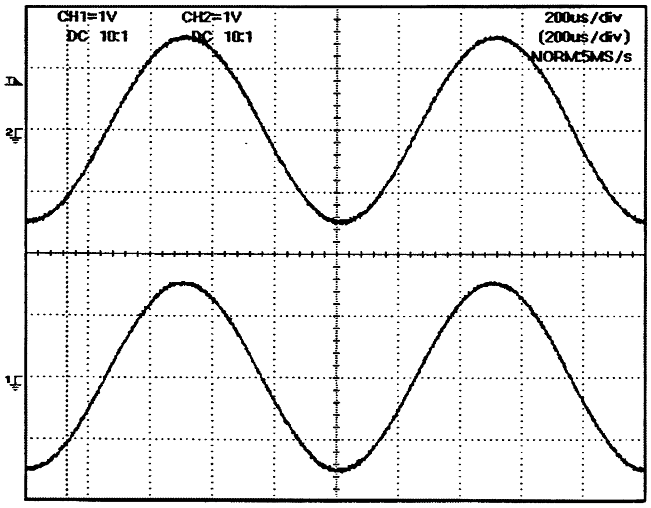


CH1 : Ⓛ TP Lch →

CH2 : Ⓜ TP Rch →

- DVD Video : 1kHz, 0dB (96kHz and 24bit Sampling)

* The A1 Disk is used.

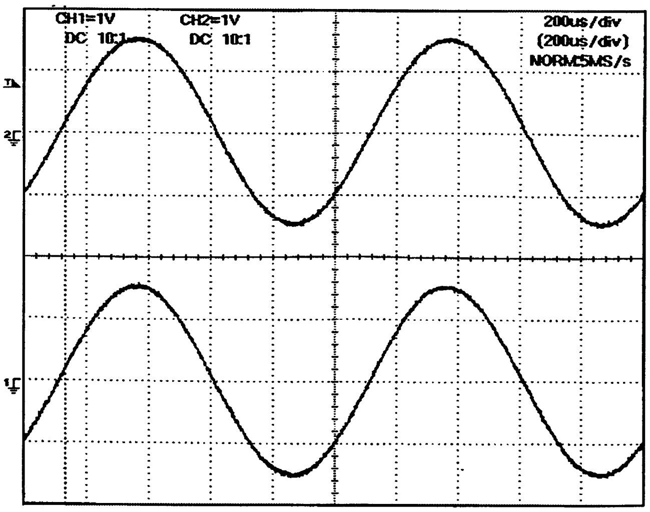


CH1 : Ⓛ TP Lch →

CH2 : Ⓜ TP Rch →

- CDDA : 1kHz, 0dB

* The TCD-785 Disk is used.

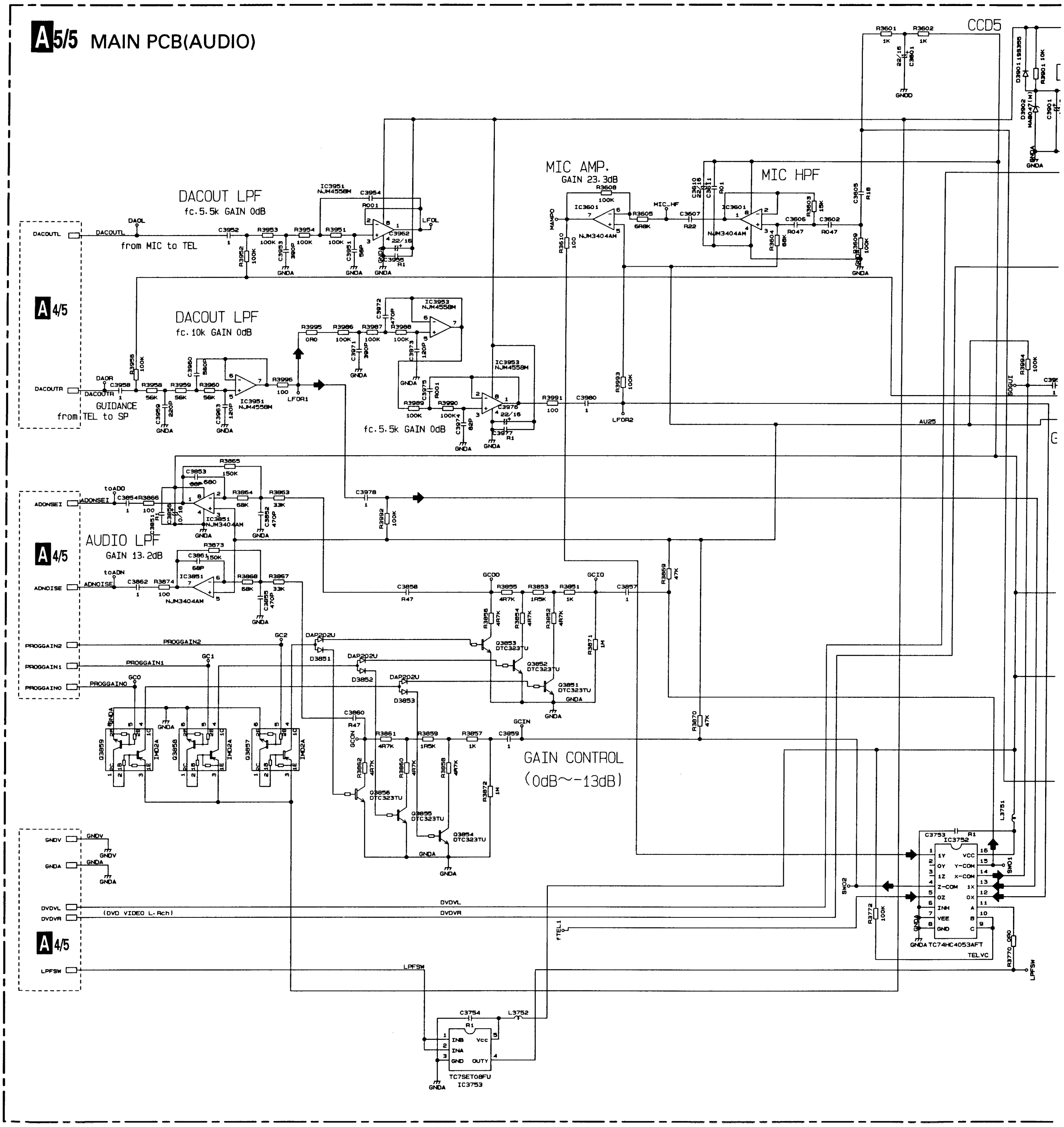


CH1 : Ⓛ TP Lch →

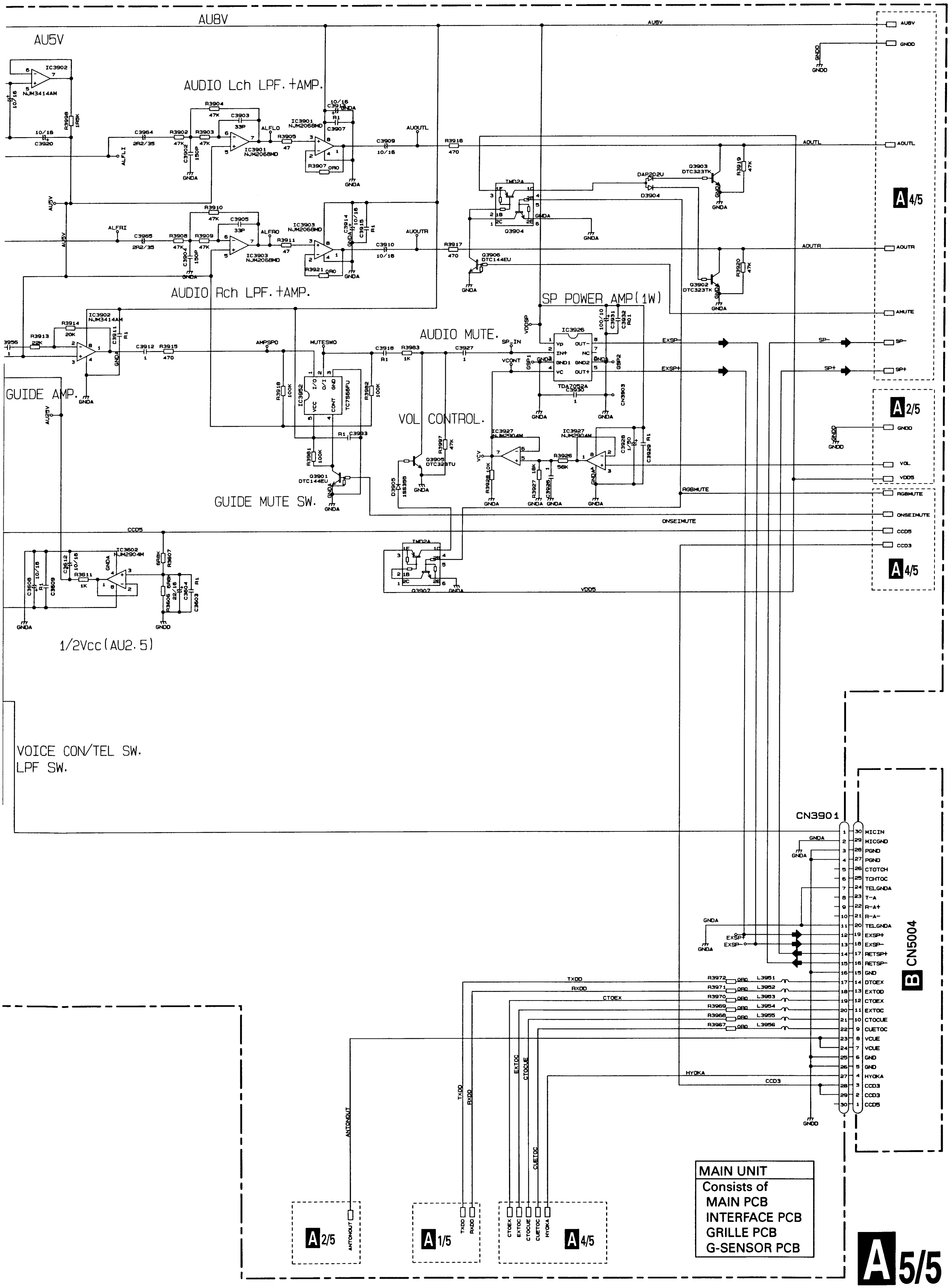
CH2 : Ⓜ TP Rch →

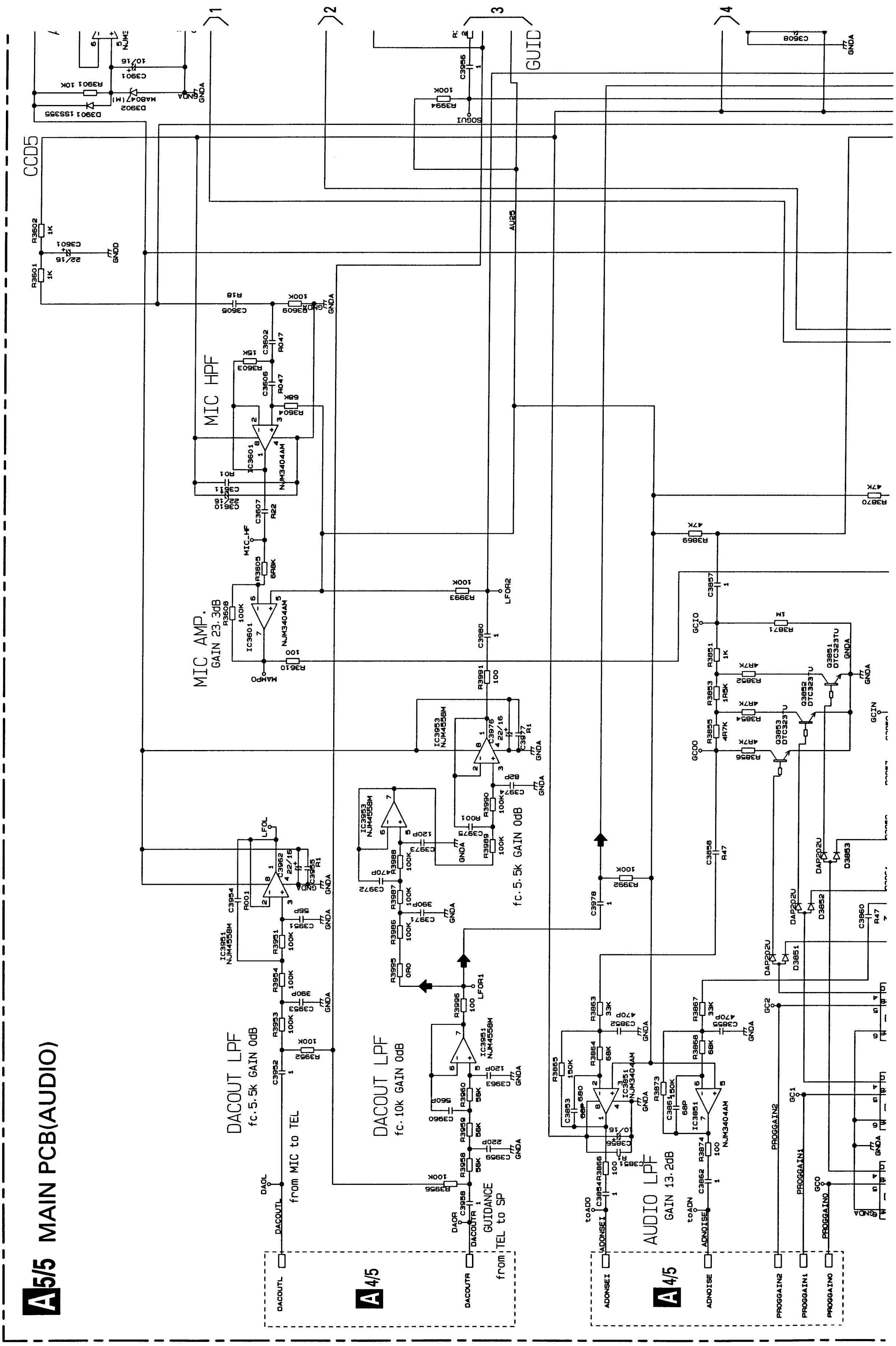
3.7 MAIN PCB 5/5 (AUDIO)(GUIDE PAGE)

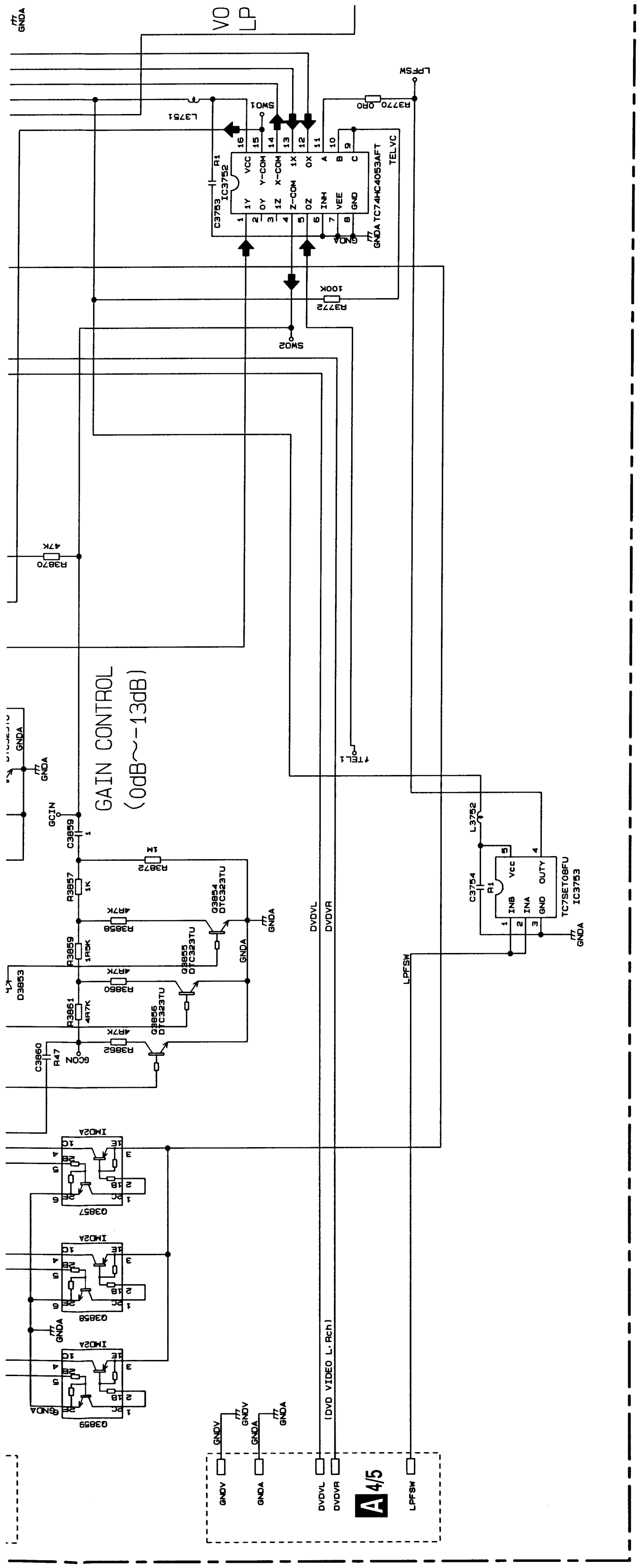
A-a 5/5


A5/5 MAIN PCB(AUDIO)
A4/5
DACOUTL
DACOUTR
ADONSEI
ADNOISE
PROGGAIN2
PROGGAIN1
PROGGAIN0
GNDV
GNDA
DVDVL
DVDVR
LPFSW
DACOUT LPF
fc.5.5k GAIN 0dB
from MIC to TEL
DACOUT LPF
fc.10k GAIN 0dB
GUIDANCE
from TEL to SP
fc.5.5k GAIN 0dB
AUDIO LPF
GAIN 13.2dB
MIC AMP.
GAIN 23.3dB
MIC HPF
GAIN CONTROL
(0dB~-13dB)
CCD5
IC3951 NJM4558M
IC3953 NJM4558M
IC3851 NJM3404AM
IC3601 NJM3404AM
IC3752 TC74HC4053AFT
IC3753 TC7SET08FU
Q3853 DTC323TU
Q3852 DTC323TU
Q3851 DTC323TU
Q3856 DTC323TU
Q3855 DTC323TU
Q3854 DTC323TU
Q3859
Q3858
Q3857
IMD2A
D3851 DAP202U
D3852 DAP202U
D3853 DAP202U
LFOL
LFOR1
LFOR2
MIC_HF
MANPO
AU25
SW01
SW02
TELVC
TEL1
GNDA
(DVD VIDEO L-Rch)

A-b 5/5


AU8V
AU5V
IC3902
NJM3414AM
AUDIO Lch LPF.+AMP.
IC3901
NJM2068MD
IC3903
NJM2068MD
AUDIO Rch LPF.+AMP.
GUIDE AMP.
AUDIO MUTE.
IC3952
TC7S66FU
SP POWER AMP(1W)
IC3926
TDA7052A
VOL CONTROL.
IC3927
NJM2904M
GUIDE MUTE SW.
Q3901
DTC144EU
Q3902
DTC323TK
Q3903
DTC323TK
Q3904
Q3905
DTC323TU
Q3906
DTC144EU
Q3907
IMD2A
D3904
DAP202U
D3905
1SS355
IC3602
NJM2904M
1/2Vcc(AU2.5)
VOICE CON/TEL SW.
LPF SW.
AOUTL
AOUTR
AMUTE
SP-
SP+
EXSP-
EXSP+
AU8V
GNDD
A 4/5
A 2/5
VOL
VDD5
RGBMUTE
ONSEIMUTE
CCD5
CCD3
CN3901
B CN5004
MICIN
MICGND
PGND
CTOTCH
TCHTOC
TELGNDA
T-A
R-A+
R-A-
EXSP+
EXSP-
RETSP+
RETSP-
GND
DTOEX
EXTOD
CTOEX
EXTOC
CTOCUE
CUETOC
VCUE
HYOKA
TXDD
RXDD
ANTONOUT
A 2/5
A 1/5
A 4/5
MAIN UNIT
Consists of
MAIN PCB
INTERFACE PCB
GRILLE PCB
G-SENSOR PCB
A 5/5


1
2
3
4
A
B
C
D
A 5/5 MAIN PCB(AUDIO)
CCD5
GUID
MIC HPF
MIC AMP. GAIN 23.3dB
DACOUT LPF fc.5.5k GAIN 0dB
DACOUT LPF fc.10k GAIN 0dB
fc.5.5k GAIN 0dB
AUDIO LPF GAIN 13.2dB
from MIC to TEL
GUIDANCE from TEL to SP
IC3601 NJM3404AM
IC3951 NJM4558M
IC3953 NJM4558M
IC3851 NJM3404AM
Q3851 DTC323TU
Q3852 DTC323TU
Q3853 DTC323TU
D3901 1SS355
D3902 MA8047(M)
MIC_HF
MAMPO
LFOR2
LFOR1
LFOL
AU25
GCIO
GCOO
GCIN
DAOL
DACOUTL
DAOR
DACOUTR
toADO
ADONSEI
toADN
ADNOISE
PROGGAIN2
PROGGAIN1
PROGGAIN0
GC2
GC1
GC0
GNDA
GNDD
A 4/5
DACOUTL
DACOUTR
A 4/5
ADONSEI
ADNOISE
PROGGAIN2
PROGGAIN1
PROGGAIN0

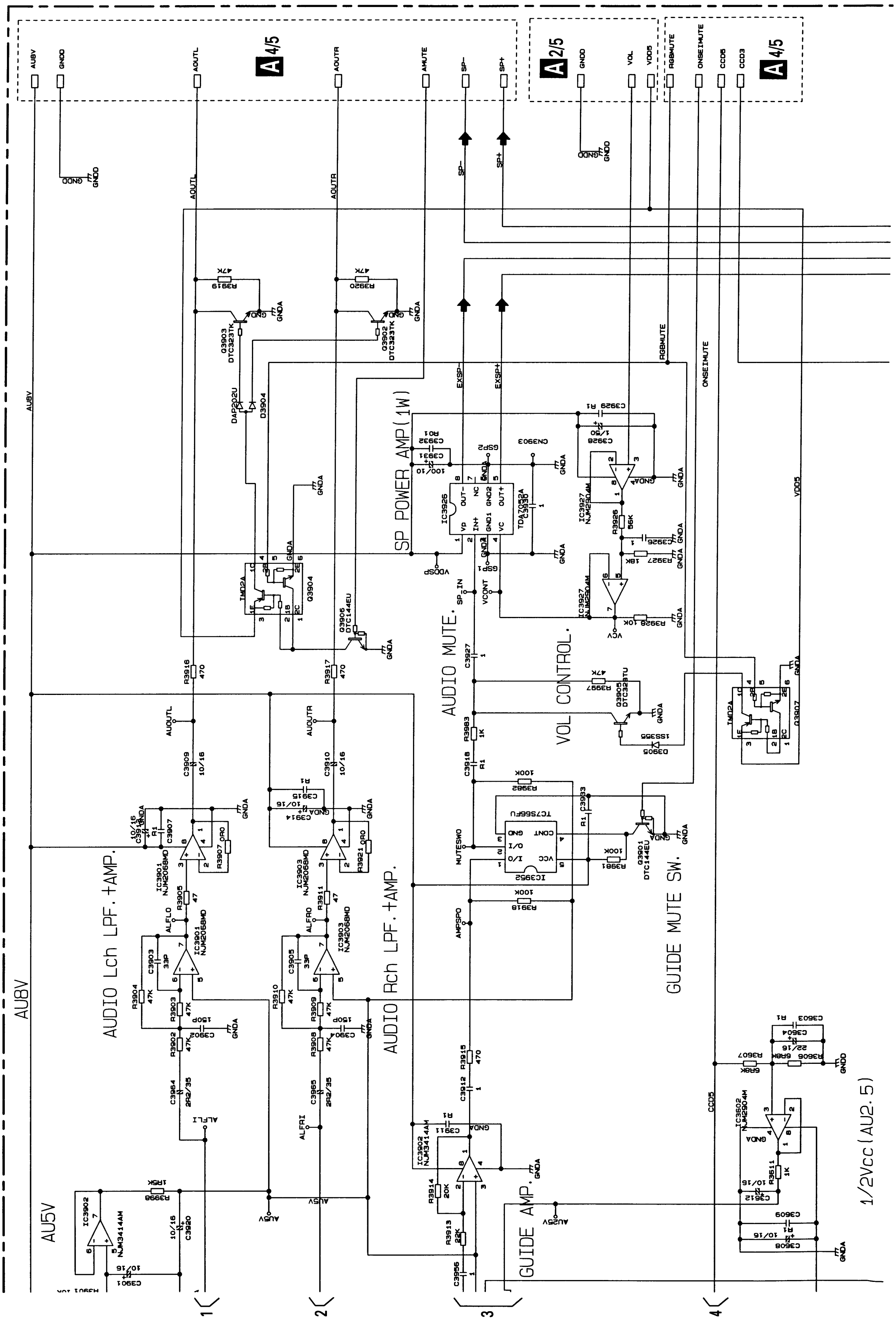

VO
LP
GNDA
LPFSW
R3770 0R0
SWO1
L3751
IC3752
TC74HC4053AFT
TELVC
VCC
Y-COM
X-COM
1X
0X
A
B
C
1Y
0Y
1Z
Z-COM
0Z
INH
VEE
GND
C3753
R1
R3772 100K
SWO2
R3870 47K
GAIN CONTROL
(0dB～-13dB)
TEL1
GCIN
C3859
R3872 1M
R3857 1K
R3858 4R7K
Q3854 DTC323TU
R3859 1R5K
Q3855 DTC323TU
D3853
R3860 4R7K
R3861 4R7K
Q3856 DTC323TU
R3862 4R7K
C3860 R47
GCON
DVDVL
DVDVR
L3752
C3754
IC3753
TC7SET08FU
Vcc
OUTY
INB
INA
Q3857
Q3858
Q3859
IMD2A
(DVD VIDEO L-Rch)
GNDV
A 4/5

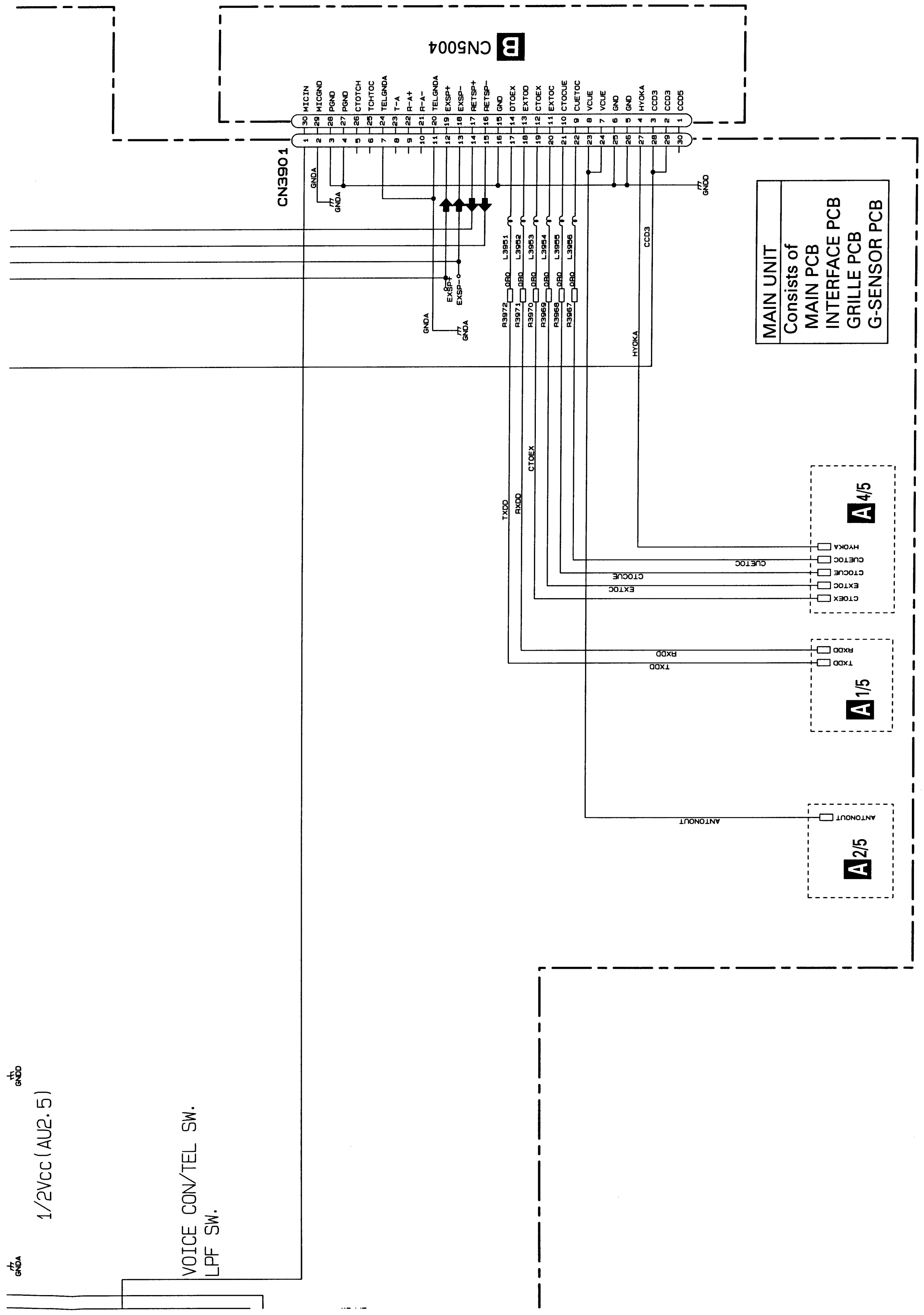
A

B

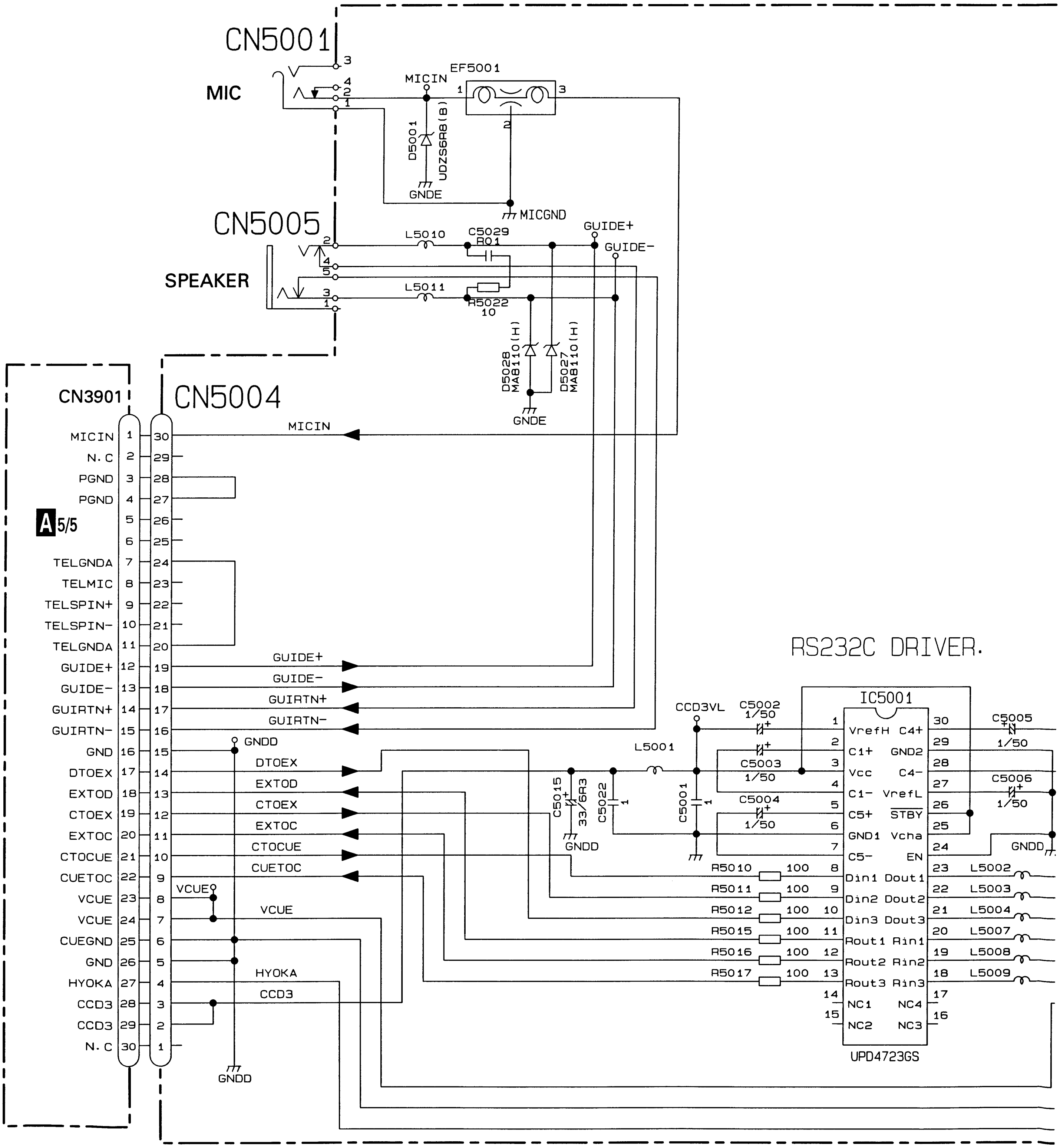
C

D


A 4/5
AU8V
GNDD
AOUTL
AOUTR
AMUTE
SP-
SP+
A 2/5
VOL
VDD5
A 4/5
RGBMUTE
ONSEIMUTE
CCD5
CCD3
SP POWER AMP(1W)
IC3926
TDA7052A
AUDIO MUTE.
VOL CONTROL.
GUIDE MUTE SW.
IC3952
TC7S66FU
IC3927
NJM2904M
Q3903
DTC323TK
Q3902
DTC323TK
D3904
DAP202U
Q3904
IMD2A
Q3905
DTC144EU
Q3906
DTC323TU
D3905
1SS355
Q3907
IMD2A
Q3901
DTC144EU
AUDIO Lch LPF.+AMP.
IC3901
NJM2068MD
AUDIO Rch LPF.+AMP.
IC3903
NJM2068MD
AU8V
AU5V
IC3902
NJM3414AM
GUIDE AMP.
IC3502
NJM2904M
1/2Vcc(AU2.5)
AUOUTL
AUOUTR
ALFLI
ALFRI
AMPSPO
MUTESWO
SP_IN
VCONT
VDDSP
EXSP-
EXSP+
GNDA
GNDD
1
2
3
4

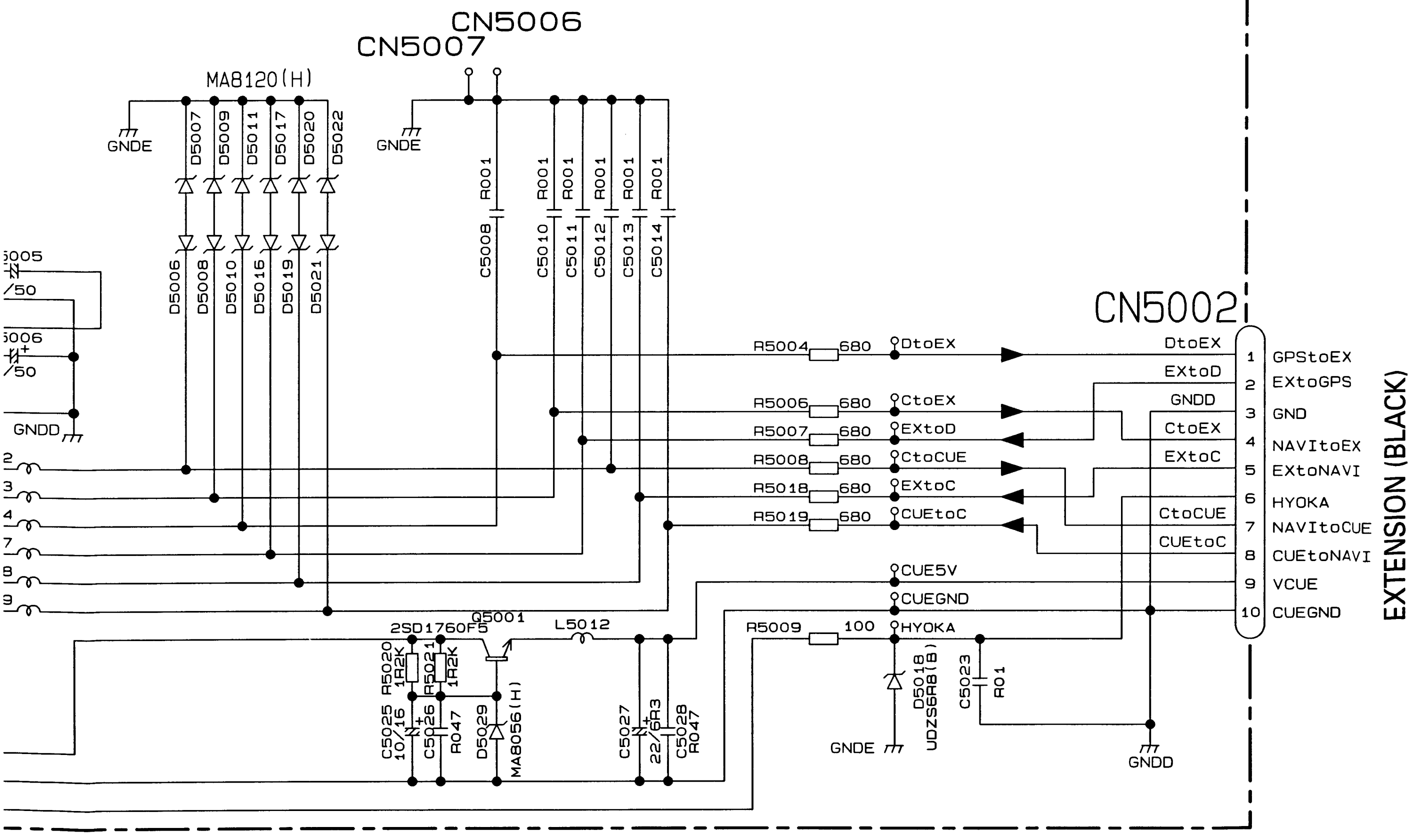

B CN5004
CN3901
MICIN
MICGND
PGND
PGND
CTOTCH
TCHTOC
TELGNDA
T-A
R-A+
R-A-
TELGNDA
EXSP+
EXSP-
RETSP+
RETSP-
GND
DTOEX
EXTOD
CTOEX
EXTOC
CTOCUE
CUETOC
VCUE
VCUE
GND
GND
HYOKA
CCD3
CCD3
CCD5
GNDA
GNDD
EXSP+
EXSP-
L3951
L3952
L3953
L3954
L3955
L3956
R3972
R3971
R3970
R3969
R3968
R3967
CCD3
HYOKA
CTOEX
TXDD
RXDD
MAIN UNIT
Consists of
MAIN PCB
INTERFACE PCB
GRILLE PCB
G-SENSOR PCB
A 4/5
CUETOC
CTOCUE
EXTOC
A 1/5
ANTONOUT
A 2/5
1/2Vcc (AU2.5)
VOICE CON/TEL SW.
LPF SW.

3.8 INTERFACE PCB

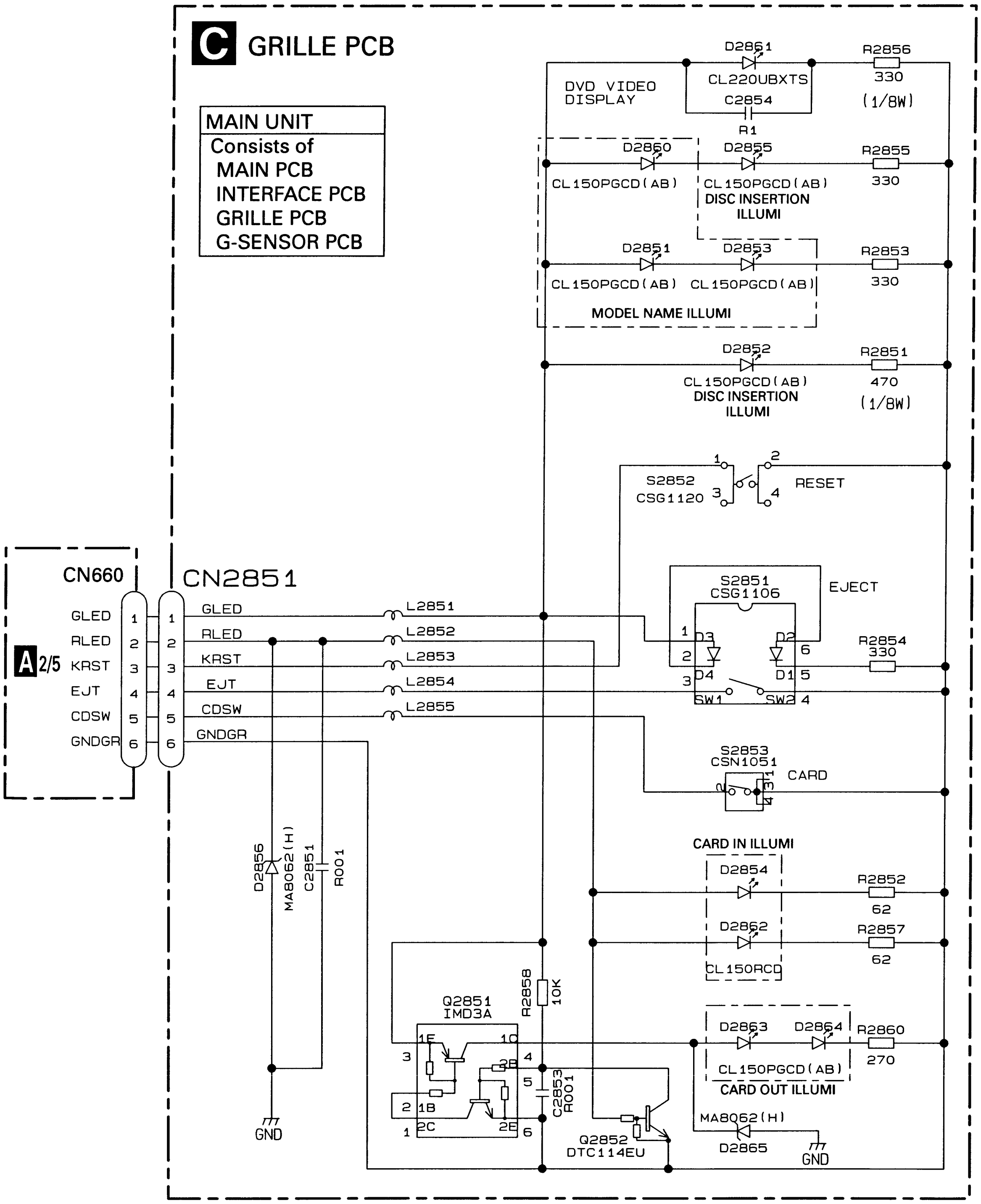

CN5001
MIC
MICIN
EF5001
D5001
UDZS6R8(B)
GNDE
MICGND
CN5005
SPEAKER
L5010
C5029
R01
GUIDE+
GUIDE-
L5011
R5022
10
D5028
MA8110(H)
D5027
MA8110(H)
GNDE
CN3901
CN5004
A 5/5
MICIN
N. C
PGND
PGND
TELGNDA
TELMIC
TELSPIN+
TELSPIN-
TELGNDA
GUIDE+
GUIDE-
GUIRTN+
GUIRTN-
GND
DTOEX
EXTOD
CTOEX
EXTOC
CTOCUE
CUETOC
VCUE
VCUE
CUEGND
GND
HYOKA
CCD3
CCD3
N. C
GNDD
VCUE
RS232C DRIVER.
IC5001
CCD3VL
C5002
1/50
C5003
1/50
C5004
1/50
L5001
C5015
33/6R3
C5022
1
C5001
1
GNDD
C5005
1/50
C5006
1/50
R5010 100
R5011 100
R5012 100
R5015 100
R5016 100
R5017 100
VrefH C4+
C1+ GND2
Vcc C4-
C1- VrefL
C5+ STBY
GND1 Vcha
C5- EN
Din1 Dout1
Din2 Dout2
Din3 Dout3
Rout1 Rin1
Rout2 Rin2
Rout3 Rin3
NC1 NC4
NC2 NC3
UPD4723GS
L5002
L5003
L5004
L5007
L5008
L5009

B INTERFACE PCB

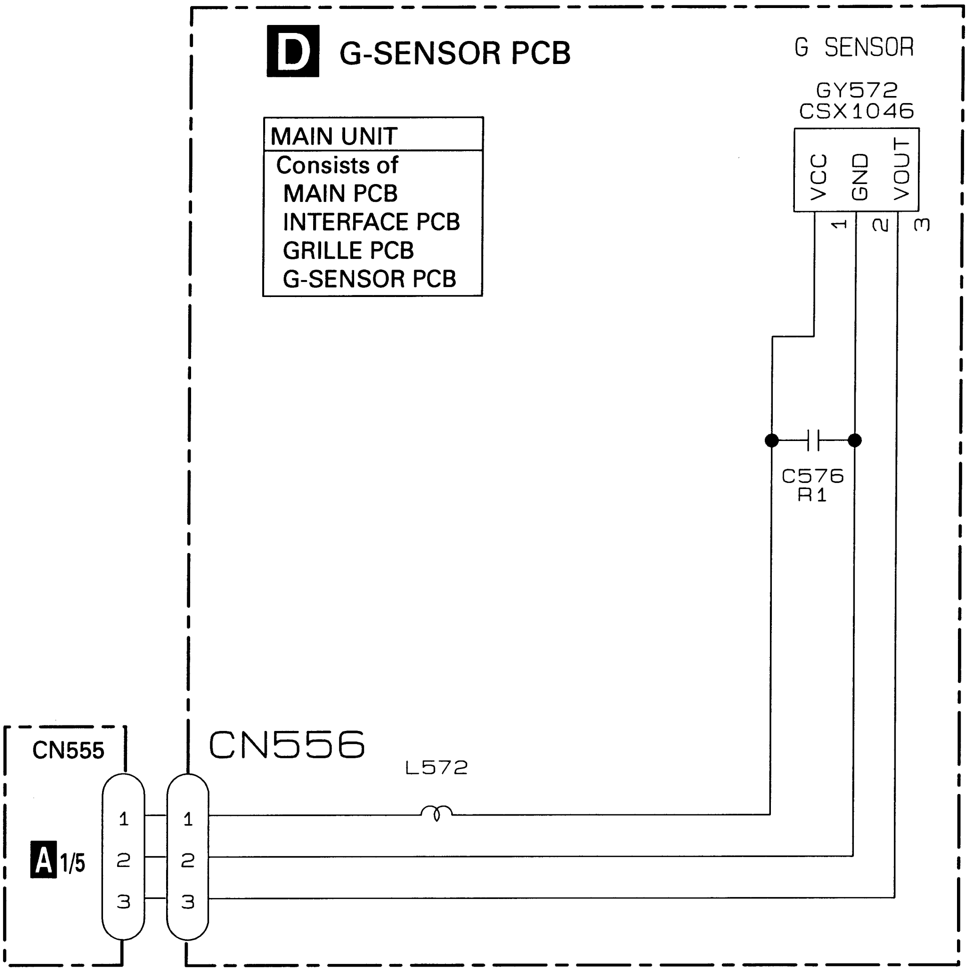
MAIN UNIT
Consists of MAIN PCB INTERFACE PCB GRILLE PCB G-SENSOR PCB


CN5006
CN5007
MA8120(H)
GNDE
D5007
D5009
D5011
D5017
D5020
D5022
D5006
D5008
D5010
D5016
D5019
D5021
R001
C5008
C5010
C5011
C5012
C5013
C5014
5005
/50
5006
/50
GNDD
CN5002
R5004 680 DtoEX
R5006 680 CtoEX
R5007 680 EXtoD
R5008 680 CtoCUE
R5018 680 EXtoC
R5019 680 CUEtoC
CUE5V
CUEGND
R5009 100 HYOKA
DtoEX
EXtoD
GNDD
CtoEX
EXtoC
CtoCUE
CUEtoC
1 GPStoEX
2 EXtoGPS
3 GND
4 NAVItoEX
5 EXtoNAVI
6 HYOKA
7 NAVItoCUE
8 CUEtoNAVI
9 VCUE
10 CUEGND
EXTENSION (BLACK)
2SD1760F5
Q5001
L5012
R5020 1R2K
R5021 1R2K
C5025 10/16
C5026
R047
D5029
MA8056(H)
C5027 22/6R3
C5028 R047
D5018 UDZS6R8(B)
C5023 R01
GNDE
GNDD

3.9 GRILLE PCB

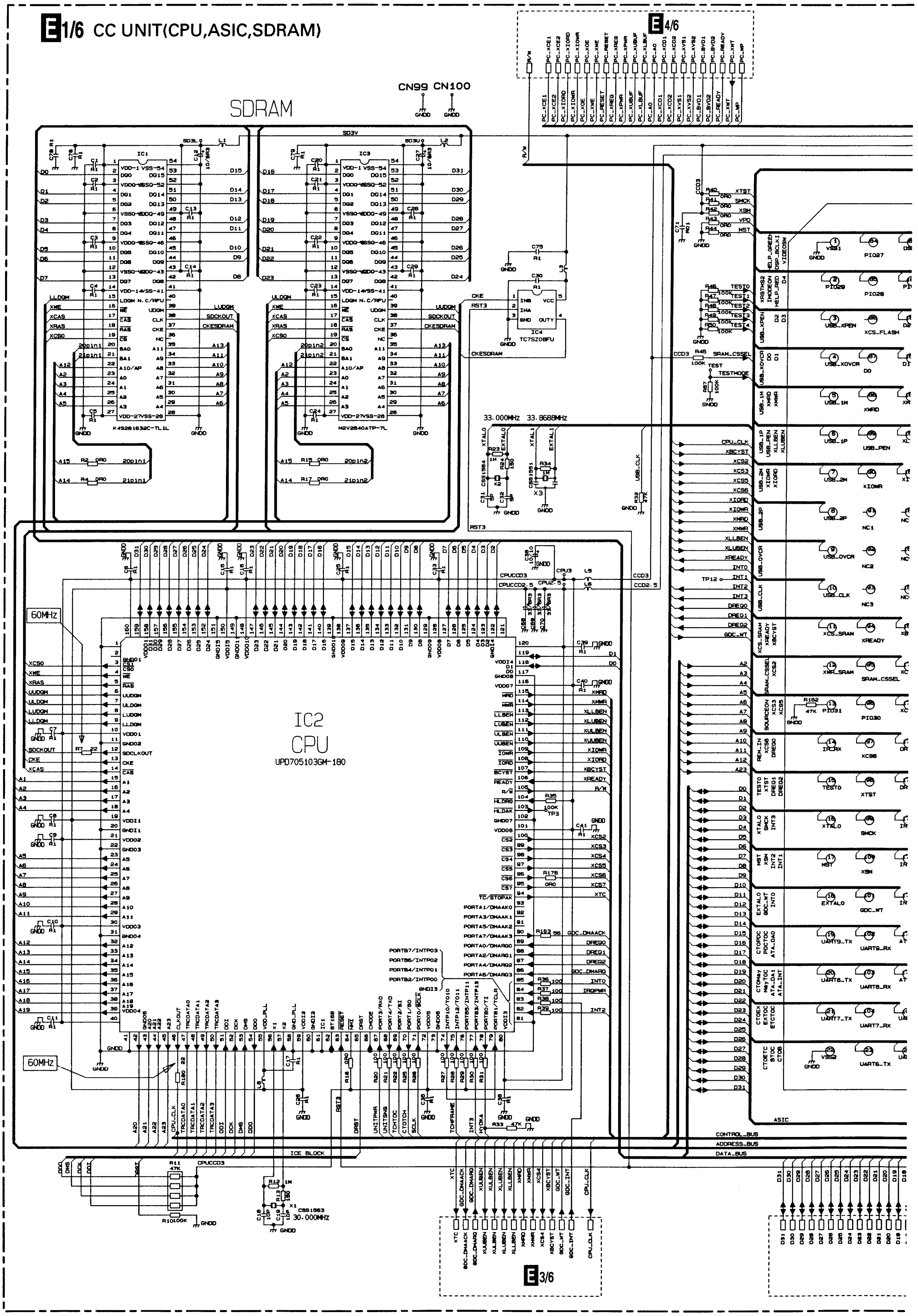

C GRILLE PCB
MAIN UNIT
Consists of
MAIN PCB
INTERFACE PCB
GRILLE PCB
G-SENSOR PCB
DVD VIDEO DISPLAY
D2861
CL220UBXTS
C2854
R1
R2856
330
(1/8W)
D2860
CL150PGCD(AB)
D2855
CL150PGCD(AB)
DISC INSERTION ILLUMI
R2855
330
D2851
CL150PGCD(AB)
D2853
CL150PGCD(AB)
MODEL NAME ILLUMI
R2853
330
D2852
CL150PGCD(AB)
DISC INSERTION ILLUMI
R2851
470
(1/8W)
S2852
CSG1120
RESET
S2851
CSG1106
EJECT
D3
D2
D4
D1
SW1
SW2
R2854
330
S2853
CSN1051
CARD
CARD IN ILLUMI
D2854
R2852
62
D2862
R2857
62
CL150RCD
D2863
D2864
R2860
270
CL150PGCD(AB)
CARD OUT ILLUMI
MA8062(H)
D2865
GND
CN660
A 2/5
GLED
RLED
KRST
EJT
CDSW
GNDGR
CN2851
L2851
L2852
L2853
L2854
L2855
D2856
MA8062(H)
C2851
R001
GND
Q2851
IMD3A
1E
1C
2B
1B
2C
2E
R2858
10K
C2853
R001
Q2852
DTC114EU

3.10 G-SENSOR PCB

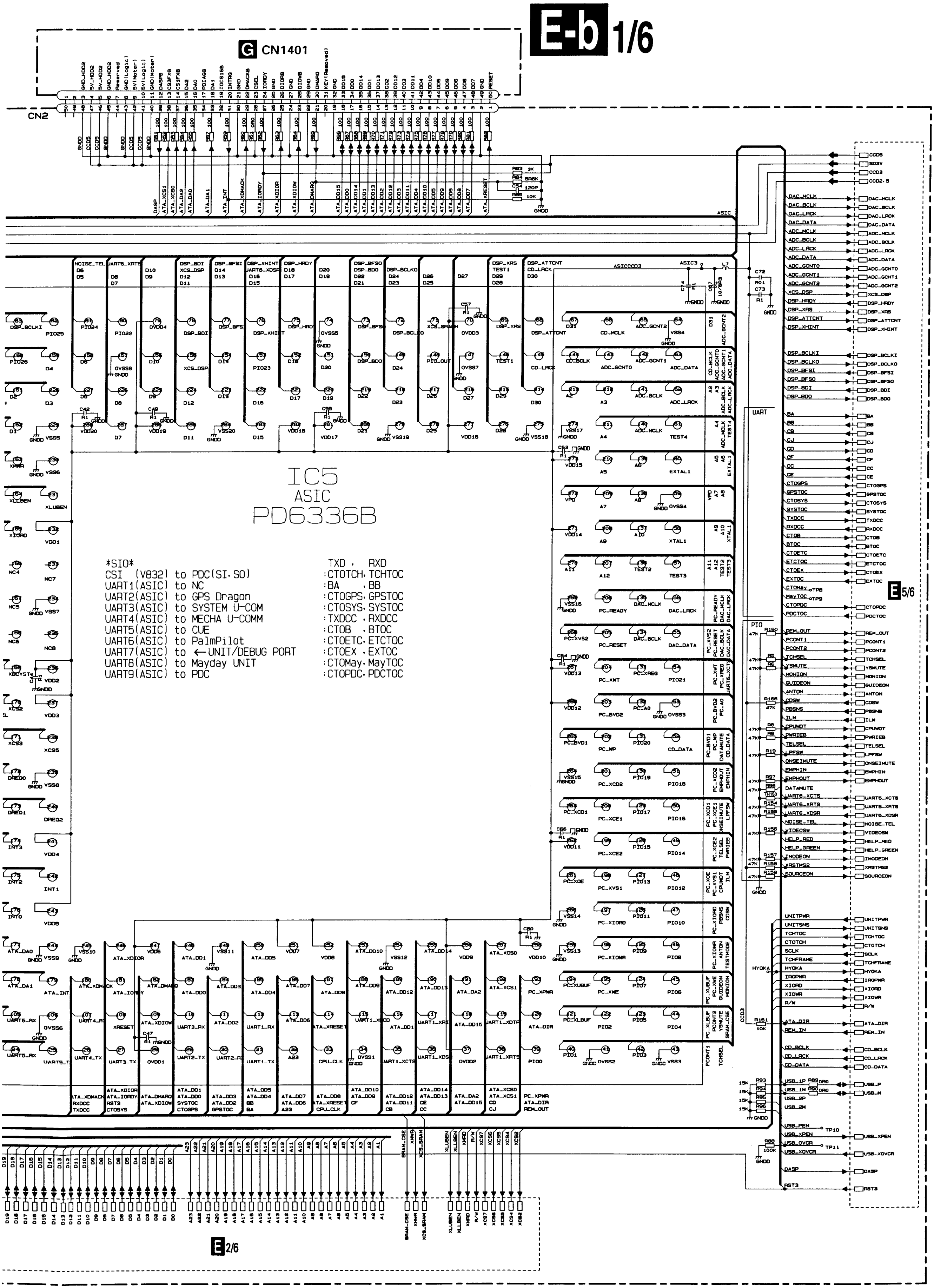

D G-SENSOR PCB
MAIN UNIT
Consists of
MAIN PCB
INTERFACE PCB
GRILLE PCB
G-SENSOR PCB
G SENSOR
GY572
CSX1046
VCC
GND
VOUT
1
2
3
C576
R1
CN555
A 1/5
CN556
L572
1
2
3
1
2
3

3.11 CC UNIT 1/6 (CPU, ASIC, SDRAM)(GUIDE PAGE)

E-a 1/6


E 1/6 CC UNIT(CPU,ASIC,SDRAM)
SDRAM
CN99 CN100
E 4/6
IC1
K4S281632C-TL1L
IC3
M2V28S40ATP-7L
IC4
TC7SZ08FU
33.000MHz 33.8688MHz
60MHz
IC2
CPU
UPD705103GM-180
ICE BLOCK
CSB1563
30.000MHz
ASIC
CONTROL_BUS
ADDRESS_BUS
DATA_BUS
E 3/6

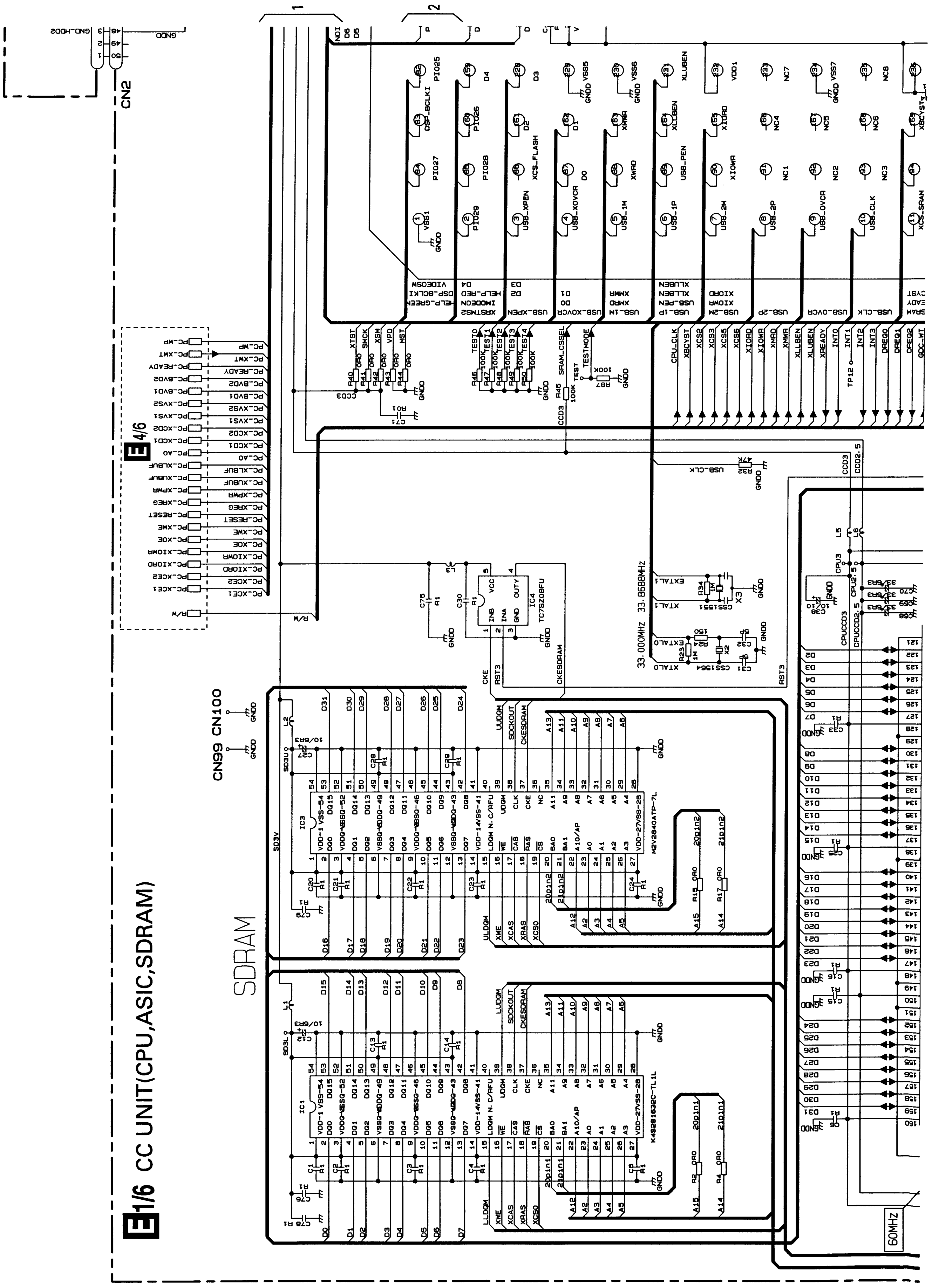
E-b 1/6

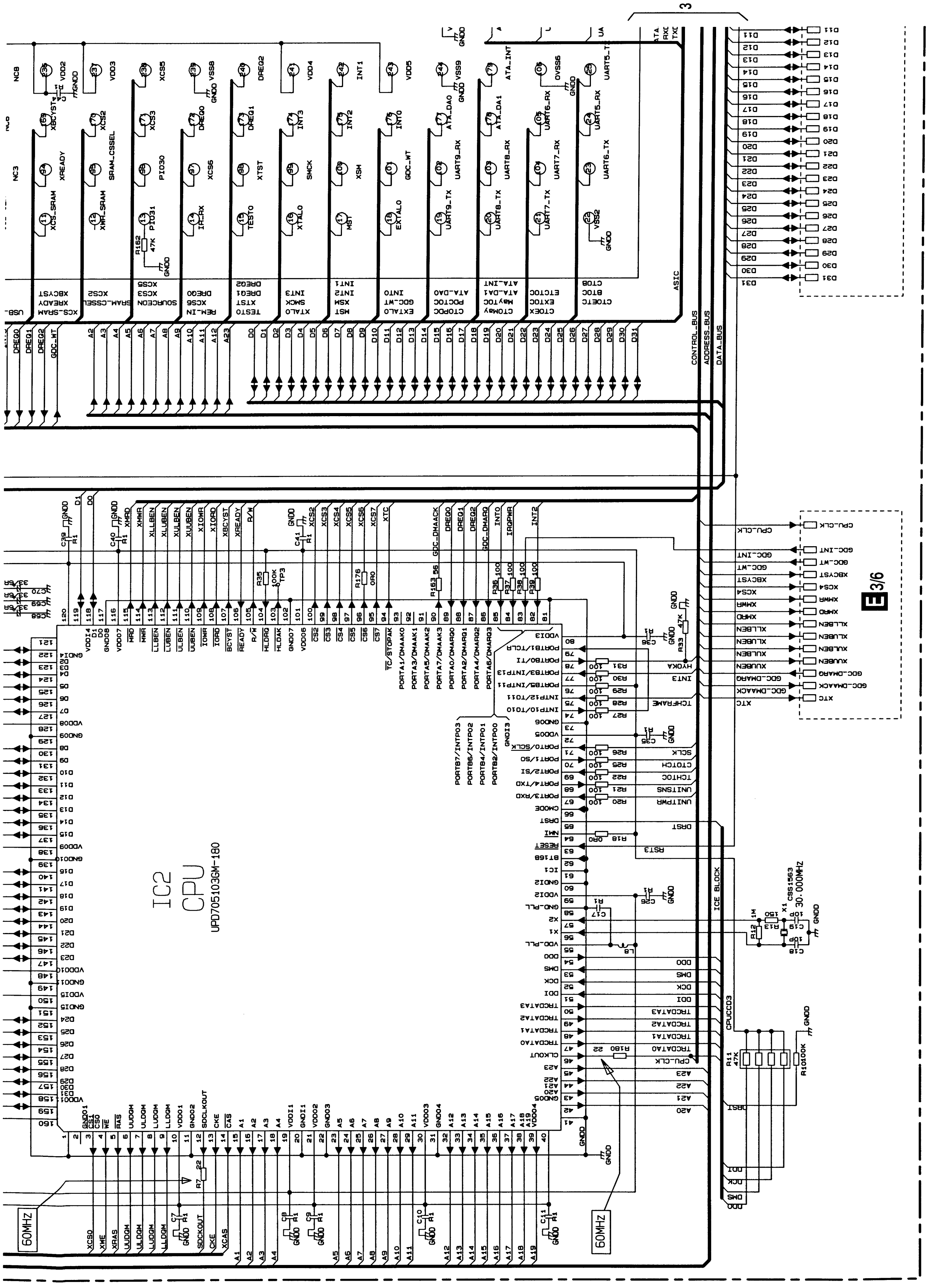

G CN1401
CN2
ASIC
ASICCCD3
ASIC3
UART
PIO
IC5
ASIC
PD6336B
HYOKA
E 5/6
E 2/6

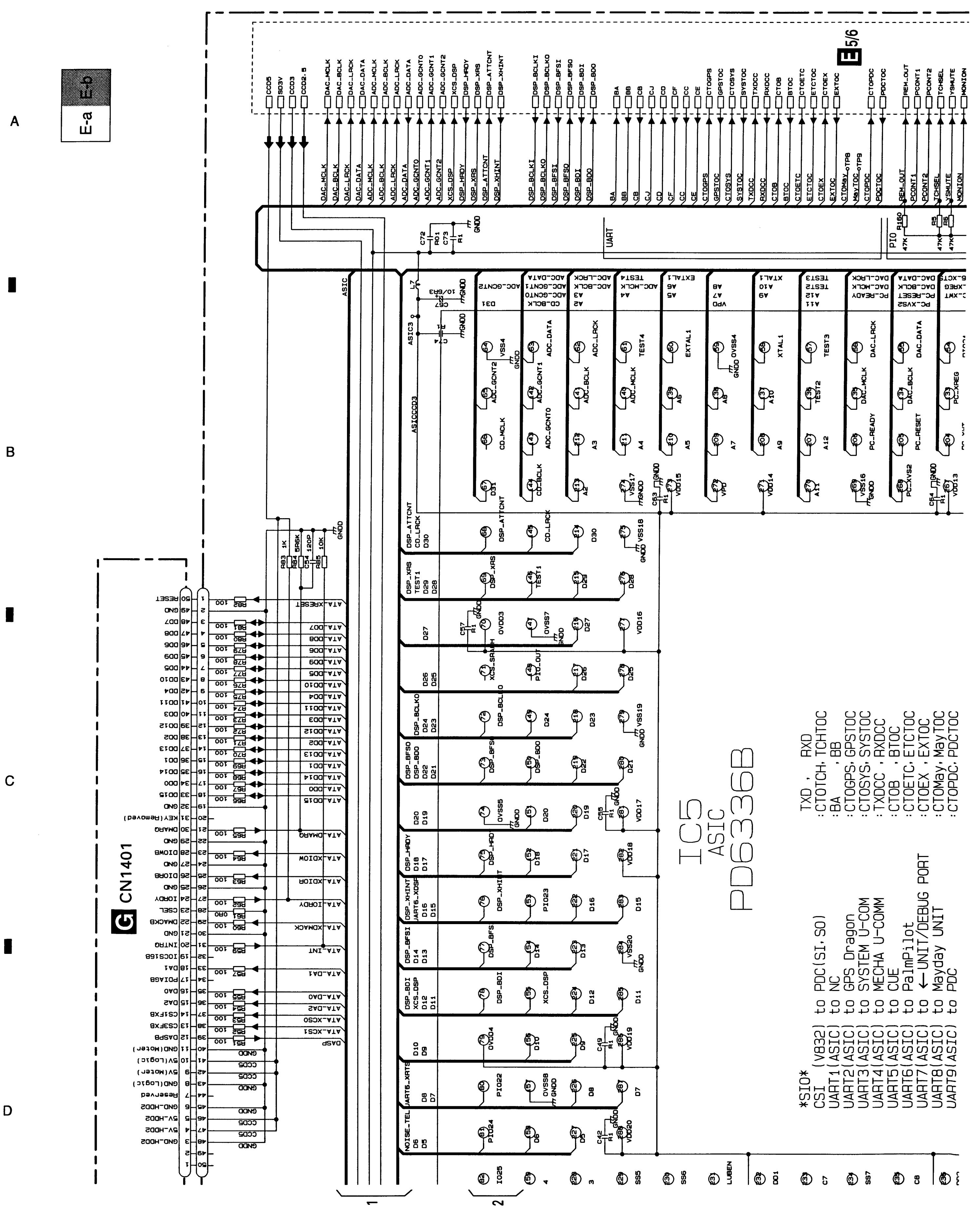
SIO

	TXD , RXD
CSI (V832) to PDC(SI·SO)	:CTOTCH·TCHTOC
UART1(ASIC) to NC	:BA ·BB
UART2(ASIC) to GPS Dragon	:CTOGPS·GPSTOC
UART3(ASIC) to SYSTEM U-COM	:CTOSYS·SYSTOC
UART4(ASIC) to MECHA U-COMM	:TXDCC ·RXDCC
UART5(ASIC) to CUE	:CTOB ·BTOC
UART6(ASIC) to PalmPilot	:CTOETC·ETCTOC
UART7(ASIC) to ←UNIT/DEBUG PORT	:CTOEX ·EXTOC
UART8(ASIC) to Mayday UNIT	:CTOMay·MayTOC
UART9(ASIC) to PDC	:CTOPDC·PDCTOC

E 1/6 CC UNIT(CPU,ASIC,SDRAM)

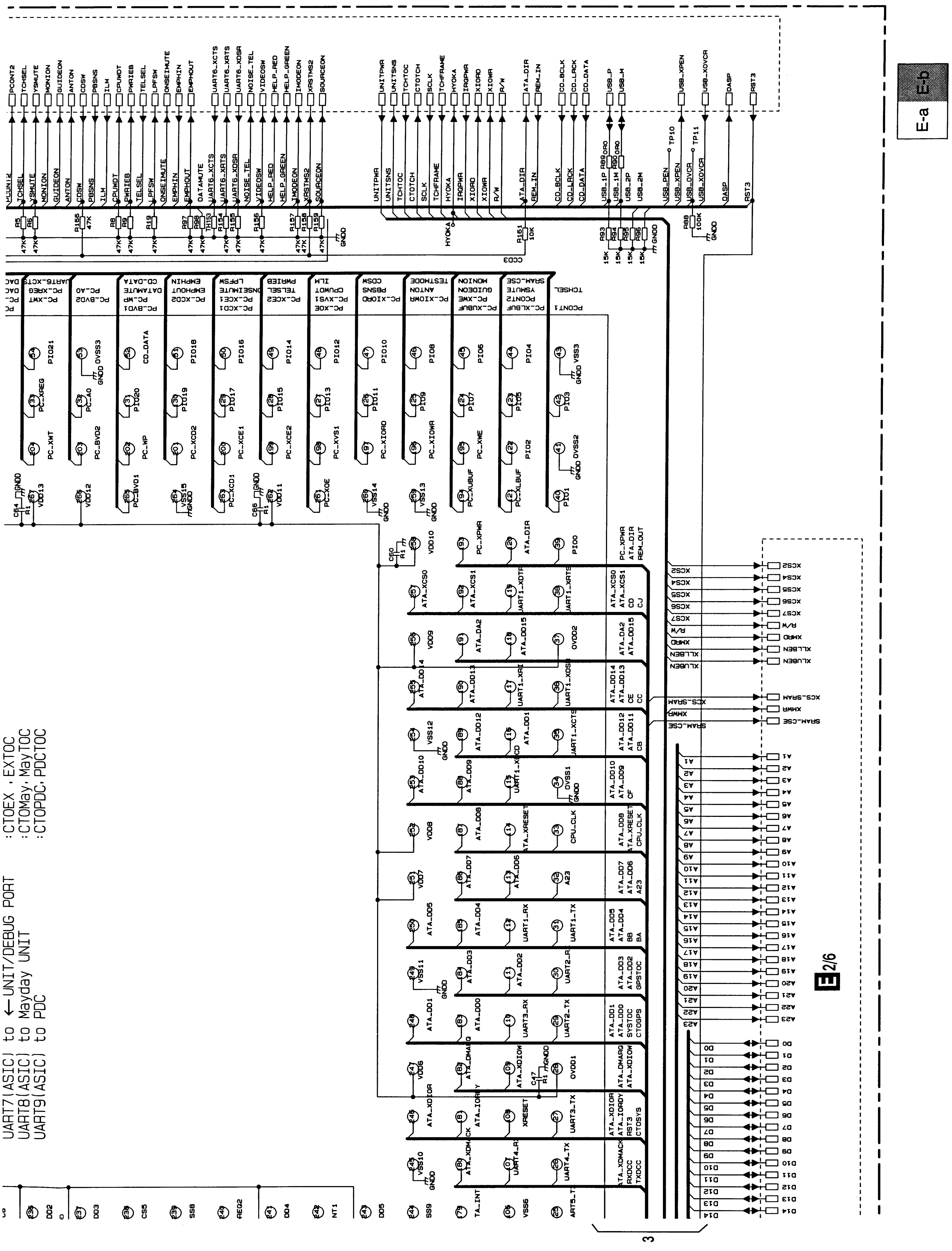

E-a
E-b
CN2
GND_HDD2
GNDD
E 4/6
PC_XCE1
PC_XCE2
PC_XIORD
PC_XIOWR
PC_XOE
PC_XWE
PC_RESET
PC_XREG
PC_XPWR
PC_XUBUF
PC_XLBUF
PC_A0
PC_XCD1
PC_XCD2
PC_XVS1
PC_XVS2
PC_BVD1
PC_BVD2
PC_READY
PC_XWT
PC_WP
R/W
CN99 CN100
SDRAM
IC1
K4S281632C-TL1L
IC3
M2V2840ATP-7L
IC4
TC7SZ08FU
CKE
RST3
CKESDRAM
SDCKOUT
UUDQM
LUDQM
ULDQM
LLDQM
XWE
XCAS
XRAS
XCS0
SD3U
SD3L
SD3V
L1
L2
L3
L5
L6
X2
CSS1564
33.000MHz
X3
CSS1551
33.8688MHz
XTAL0
XTAL1
EXTAL0
EXTAL1
CCD3
CCD2.5
CPU3
CPU2.5
CPUCCD3
CPUCCD2.5
USB_CLK
SRAM_CSSEL
TESTMODE
TP12
60MHz


IC2
CPU
UPD705103GM-180
ASIC
CONTROL_BUS
ADDRESS_BUS
DATA_BUS
ICE BLOCK
E 3/6
60MHz
60MHz
X1
CSS1563
30.000MHz
CPU-CLK
GDC-INT
GDC-WT
XBCYST
XCS4
XMWR
XMRD
XLLBEN
XLUBEN
XULBEN
XUUBEN
GDC-DMARQ
GDC-DMAACK
XTC
D11
D31
TCHFRAME
SCLK
CTOTCH
TCHTOC
UNITSNS
UNITPWR
DRST
RST3
TRCDATA0
TRCDATA1
TRCDATA2
TRCDATA3
DDI
DCK
DMS
DDO
A20
A21
A22
A23

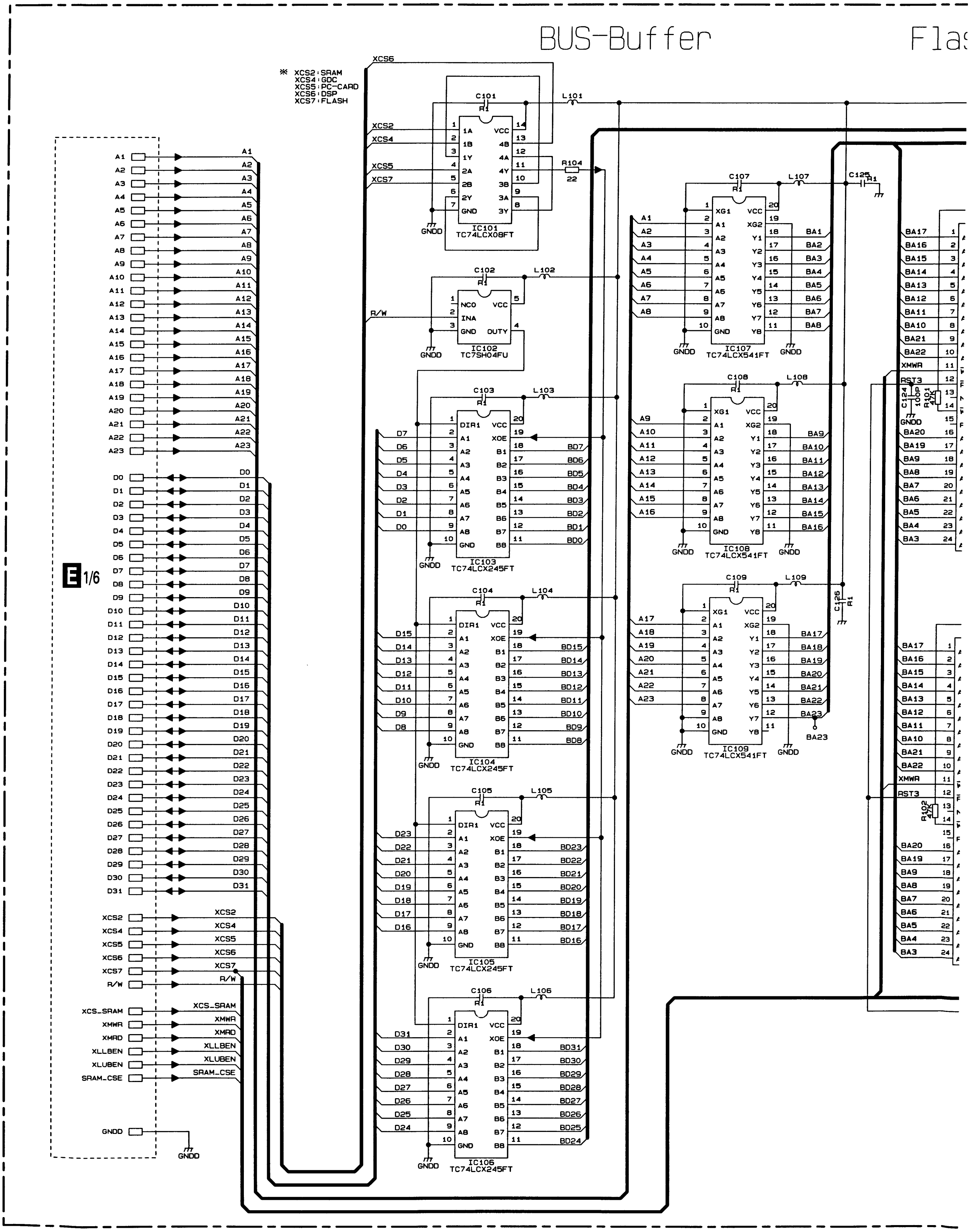

1
2
3
4
A
B
C
D
E-a
E-b
E 5/6
G CN1401
ASIC
UART
PIO
GNDD
IC5
ASIC
PD6336B
CCD5
SD3V
CCD3
CCD2.5
DAC_MCLK
DAC_BCLK
DAC_LRCK
DAC_DATA
ADC_MCLK
ADC_BCLK
ADC_LRCK
ADC_DATA
ADC_GCNT0
ADC_GCNT1
ADC_GCNT2
XCS_DSP
DSP_HRDY
DSP_XRS
DSP_ATTCNT
DSP_XHINT
DSP_BCLKI
DSP_BCLKO
DSP_BFSI
DSP_BFSO
DSP_BDI
DSP_BDO
BA
BB
CB
CJ
CD
CF
CC
CE
CTOGPS
GPSTOC
CTOSYS
SYSTOC
TXDCC
RXDCC
CTOB
BTOC
CTOETC
ETCTOC
CTOEX
EXTOC
CTOMay
MayTOC
CTOPDC
PDCTOC
REM_OUT
PCONT1
PCONT2
TCHSEL
YSMUTE
MONION
ATA-XRESET
ATA-DD0 … ATA-DD15
ATA-DMARQ
ATA-XDIOW
ATA-XDIOR
ATA-IORDY
ATA-XDMACK
ATA-INT
ATA-DA0
ATA-DA1
ATA-DA2
ATA-XCS0
ATA-XCS1
DASP
50 RESET
49 GND
48 DD7
47 DD8
46 DD6
45 DD9
44 DD5
43 DD10
42 DD4
41 DD11
40 DD3
39 DD12
38 DD2
37 DD13
36 DD1
35 DD14
34 DD0
33 DD15
32 GND
31 KEY(Removed)
30 DMARQ
29 GND
28 DIOWB
27 GND
26 DIORB
25 GND
24 IORDY
23 CSEL
22 DMACKB
21 GND
20 INTRQ
19 IOCS16B
18 DA1
17 PDIAGB
16 DA0
15 DA2
14 CS1FXB
13 CS3FXB
12 DASPB
11 GND(Moter)
10 5V(Logic)
9 5V(Moter)
8 GND(Logic)
7 Reserved
6 GND-HDD2
5 5V-HDD2
4 5V-HDD2
3 GND-HDD2

SIO
CSI (V832) to PDC(SI,SO)
UART1(ASIC) to NC
UART2(ASIC) to GPS Dragon
UART3(ASIC) to SYSTEM U-COM
UART4(ASIC) to MECHA U-COMM
UART5(ASIC) to CUE
UART6(ASIC) to PalmPilot
UART7(ASIC) to ←UNIT/DEBUG PORT
UART8(ASIC) to Mayday UNIT
UART9(ASIC) to PDC

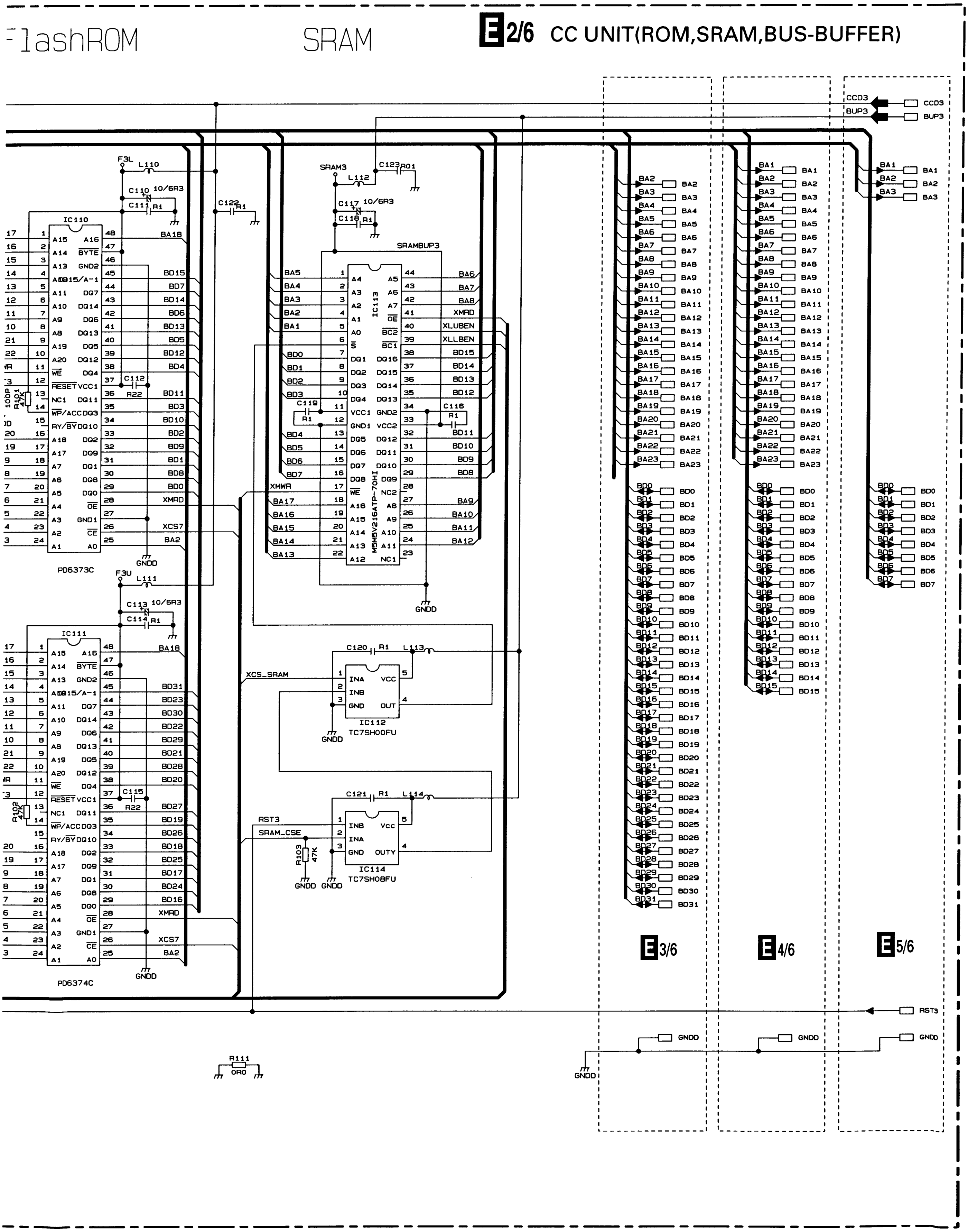
TXD , RXD
:CTOTCH,TCHTOC
:BA ,BB
:CTOGPS,GPSTOC
:CTOSYS,SYSTOC
:TXDCC ,RXDCC
:CTOB ,BTOC
:CTOETC,ETCTOC
:CTOEX ,EXTOC
:CTOMay,MayTOC
:CTOPDC,PDCTOC


A
B
C
D
E-a
E-b
UART7(ASIC) to ←UNIT/DEBUG PORT :CTOEX , EXTOC
UART8(ASIC) to Mayday UNIT :CTOMay, MayTOC
UART9(ASIC) to PDC :CTOPDC, PDCTOC
PCONT2
TCHSEL
YSMUTE
MONION
GUIDEON
ANTON
CDSW
PBSNS
ILM
CPUWDT
PWRIEB
TELSEL
LPFSW
ONSEIMUTE
EMPHIN
EMPHOUT
UART6_XCTS
UART6_XRTS
UART6_XDSR
NOISE_TEL
VIDEOSW
HELP_RED
HELP_GREEN
IMODEON
XRSTMS2
SOURCEON
UNITPWR
UNITSNS
TCHTOC
CTOTCH
SCLK
TCHFRAME
HYOKA
IRQPWR
XIORD
XIOWR
R/W
ATA_DIR
REM_IN
CD_BCLK
CD_LRCK
CD_DATA
USB_P
USB_M
USB_XPEN
USB_XOVCR
DASP
RST3
TP10
TP11
CCD3
XCS2
XCS4
XCS5
XCS6
XCS7
XMRD
XLLBEN
XLUBEN
XCS_SRAM
XMWR
SRAM_CSE
E2/6
3

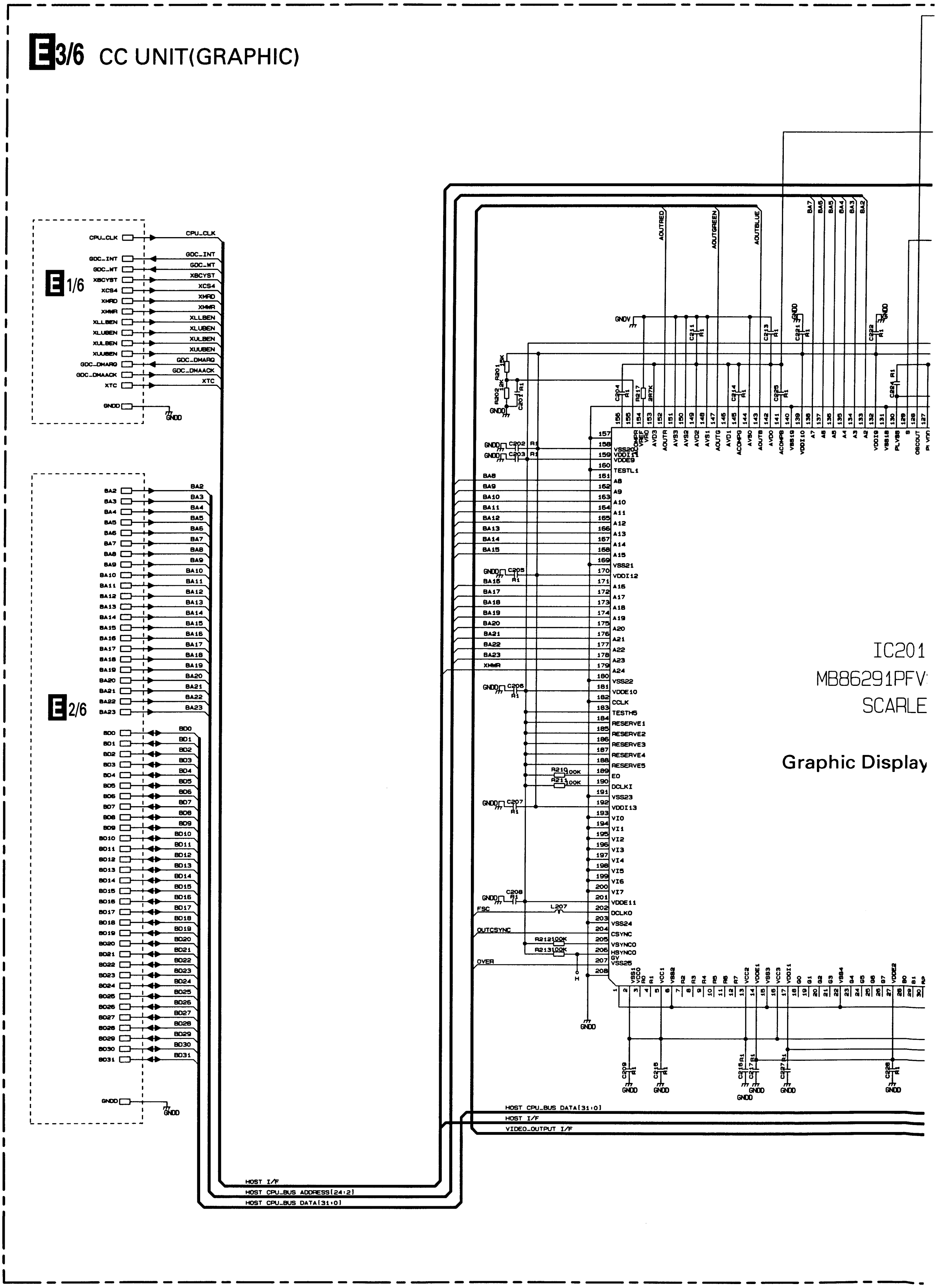
3.12 CC UNIT 2/6 (ROM, SRAM, BUS-BUFFER)

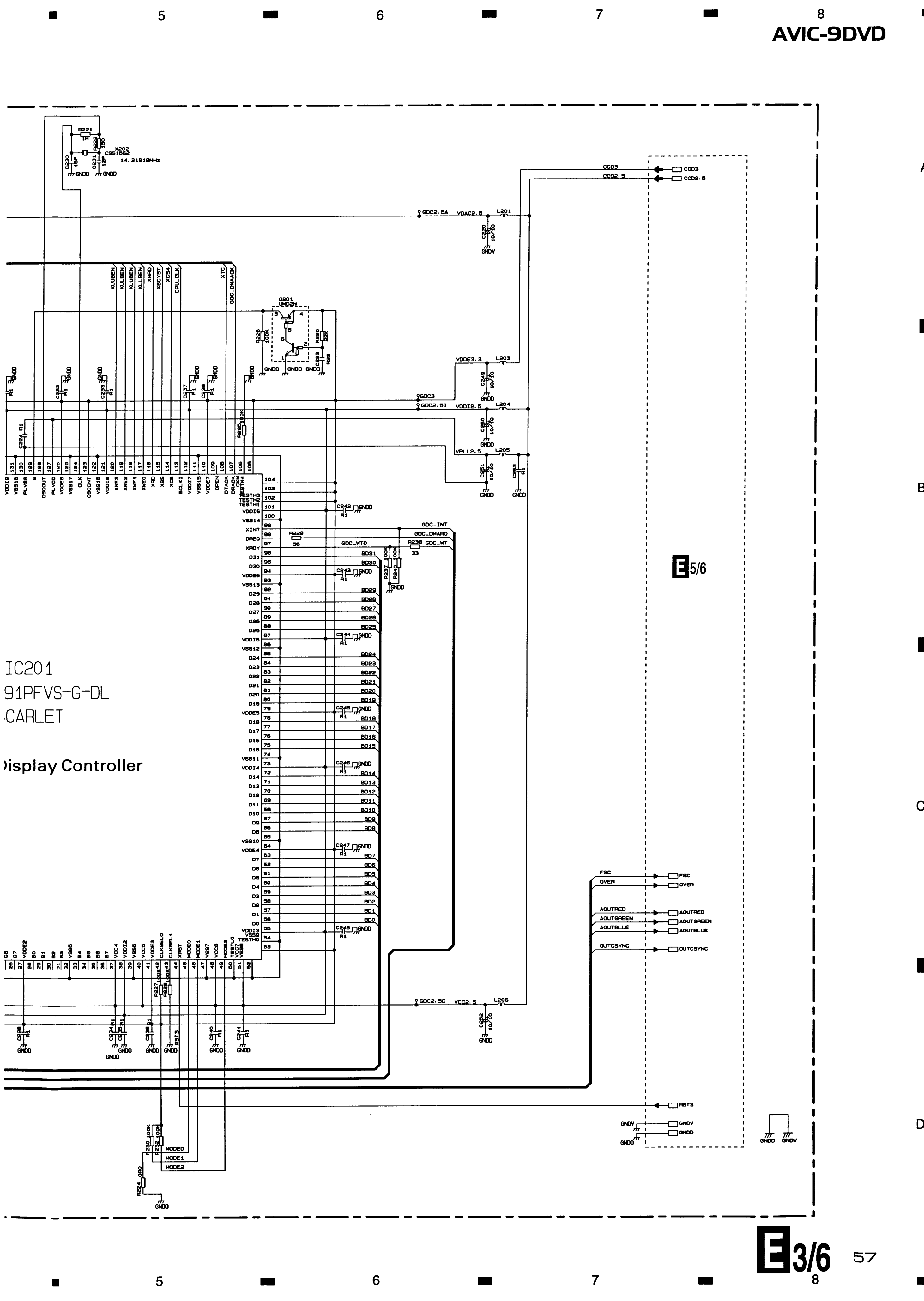

A
B
C
D
BUS-Buffer
Flas
※ XCS2 : SRAM
XCS4 : GDC
XCS5 : PC-CARD
XCS6 : DSP
XCS7 : FLASH
E 1/6
A1 … A23
D0 … D31
XCS2
XCS4
XCS5
XCS6
XCS7
R/W
XCS_SRAM
XMWR
XMRD
XLLBEN
XLUBEN
SRAM_CSE
GNDD
C101
L101
R104 22
IC101 TC74LCX08FT
C102
L102
IC102 TC7SH04FU
C103
L103
IC103 TC74LCX245FT
C104
L104
IC104 TC74LCX245FT
C105
L105
IC105 TC74LCX245FT
C106
L106
IC106 TC74LCX245FT
C107
L107
IC107 TC74LCX541FT
C108
L108
IC108 TC74LCX541FT
C109
L109
IC109 TC74LCX541FT
C125
C126
C124 100P
R101 47K
R102 47K
BA1 … BA23
BD0 … BD31
XMWR
RST3
DIR1
XOE
VCC
GND
XG1
XG2

E 2/6 CC UNIT(ROM,SRAM,BUS-BUFFER)

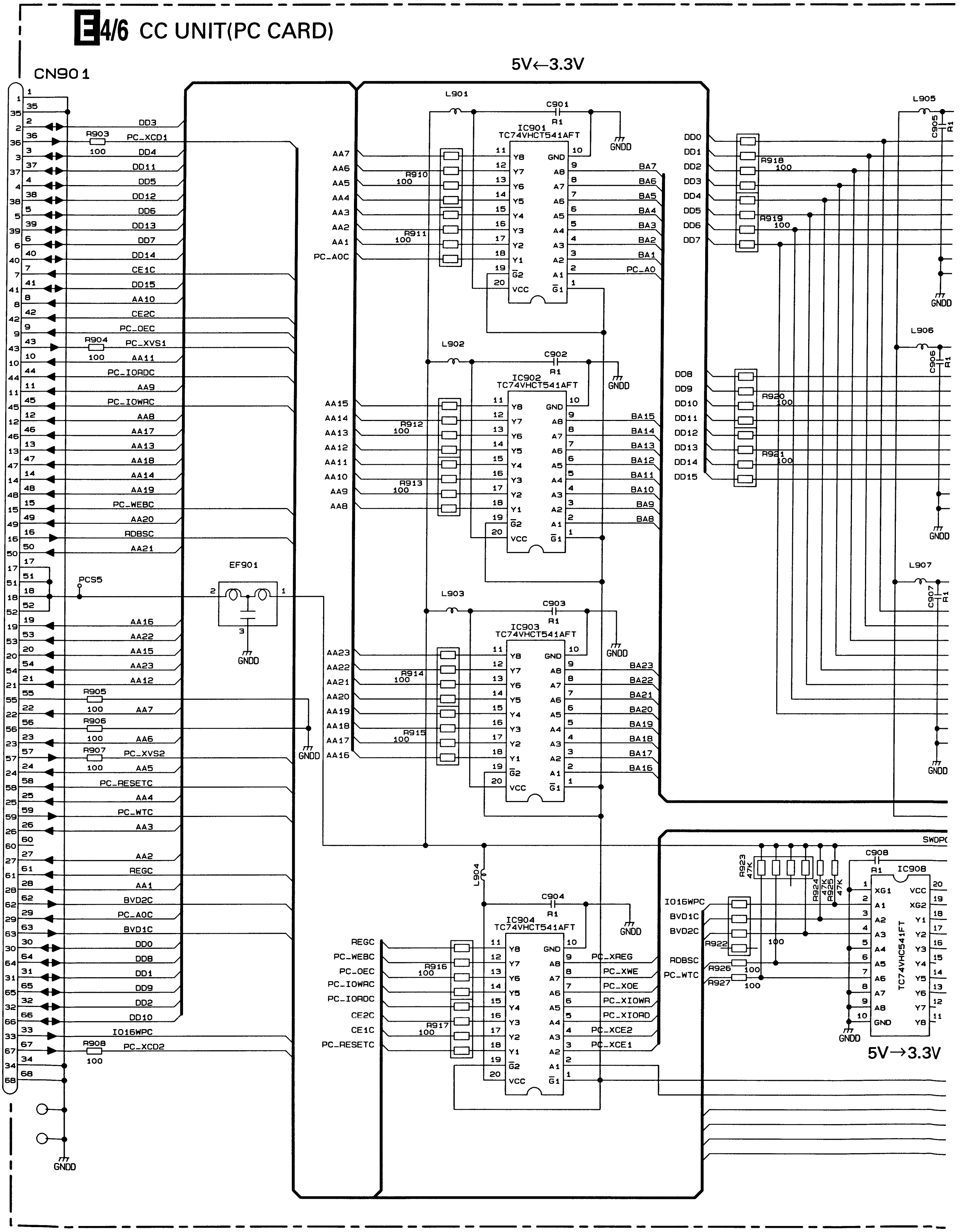

FlashROM
SRAM
IC110
PD6373C
IC111
PD6374C
IC113
M5M5V216ATP-70HI
IC112
TC7SH00FU
IC114
TC7SH08FU
F3L
F3U
SRAM3
SRAMBUP3
L110
L111
L112
L113
L114
C110 10/6R3
C111 R1
C112 R22
C113 10/6R3
C114 R1
C115 R22
C116 R1
C117 10/6R3
C118 R1
C119 R1
C120 R1
C121 R1
C122 R1
C123 R01
R101 47K
R102 47K
R103 47K
100P
R111 0R0
XCS_SRAM
SRAM_CSE
RST3
XMWR
XMRD
XCS7
XLUBEN
XLLBEN
BA18
CCD3
BUP3
GNDD
E 3/6
E 4/6
E 5/6

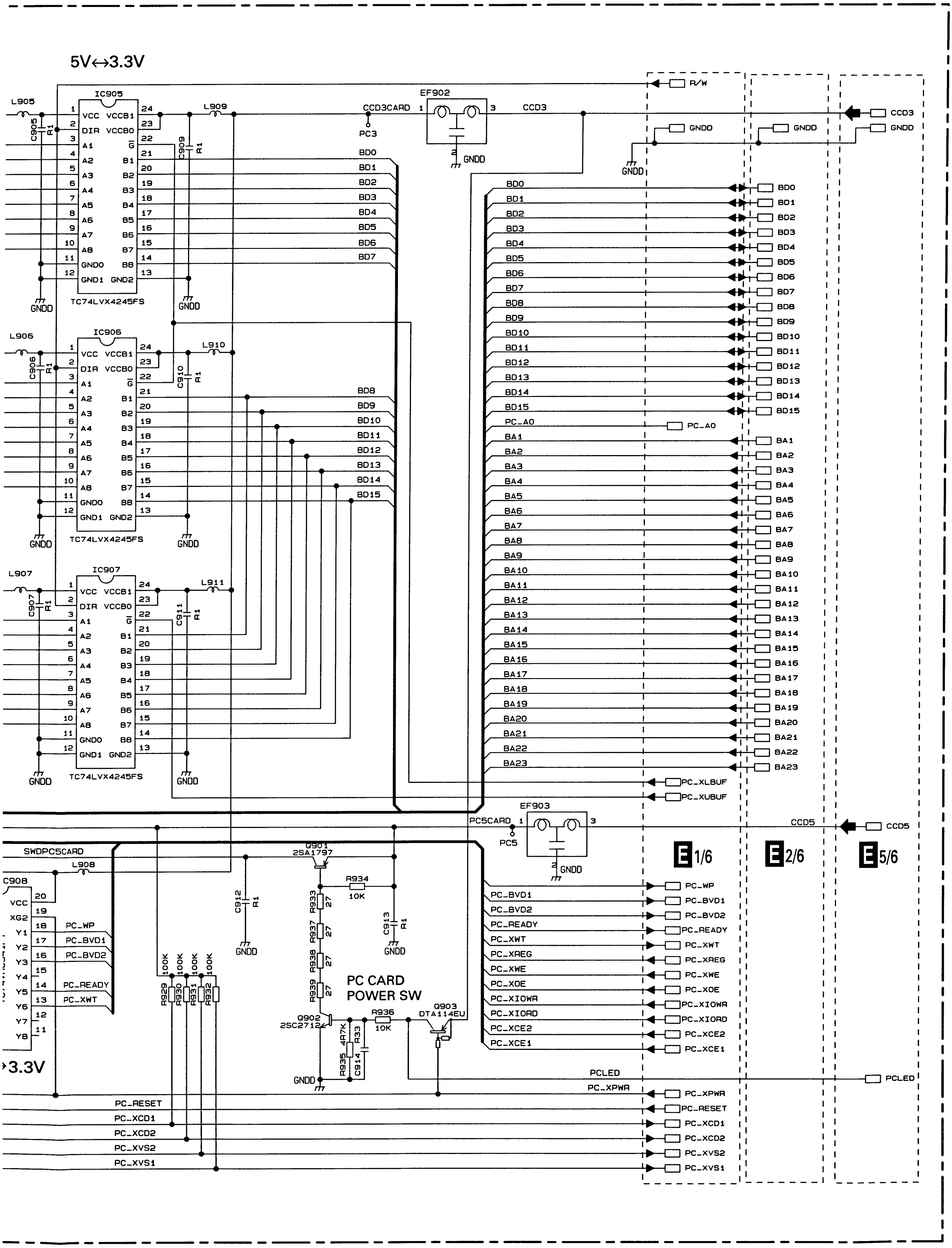
3.13 CC UNIT 3/6 (GRAPHIC)


E 3/6 CC UNIT(GRAPHIC)
E 1/6
CPU_CLK
GDC_INT
GDC_WT
XBCYST
XCS4
XMRD
XMWR
XLLBEN
XLUBEN
XULBEN
XUUBEN
GDC_DMARQ
GDC_DMAACK
XTC
GNDD
E 2/6
BA2 … BA23
BD0 … BD31
HOST I/F
HOST CPU_BUS ADDRESS[24:2]
HOST CPU_BUS DATA[31:0]
VIDEO_OUTPUT I/F
AOUTRED
AOUTGREEN
AOUTBLUE
GNDV
R201 1K
R202 12K
R217 2R7K
C201
C202
C203
C204
C205
C206
C207
C208
C209
C211
C213
C214
C215
C216
C217
C221
C222
C224
C225
C227
C228
R210 100K
R211 100K
R212 100K
R213 100K
L207
FSC
OUTCSYNC
OVER
XMWR
VSS20
VDDI11
VDDE9
TESTL1
A8
A9
A10
A11
A12
A13
A14
A15
VSS21
VDDI12
A16
A17
A18
A19
A20
A21
A22
A23
A24
VSS22
VDDE10
CCLK
TESTH5
RESERVE1
RESERVE2
RESERVE3
RESERVE4
RESERVE5
E0
DCLKI
VSS23
VDDI13
VI0
VI1
VI2
VI3
VI4
VI5
VI6
VI7
VDDE11
DCLKO
VSS24
CSYNC
VSYNCO
HSYNCO
GV
VSS25
IC201
MB86291PFV
SCARLE
Graphic Display


5
6
7
8
A
B
C
D
IC201
91PFVS-G-DL
CARLET
Display Controller
R221 1M
R222 180
X202 CSS1562 14.31818MHz
C230 15P
C231 12P
GNDD
GDC2.5A
VDAC2.5
L201
C220 10/10
GNDV
CCD3
CCD2.5
Q201 UMD2N
R226 10K
R220 22K
C223 R22
VDDE3.3
L203
C249 10/10
GDC3
GDC2.5I
VDDI2.5
L204
C250 10/10
VPLL2.5
L205
C251 10/10
C253
R225 100K
C224
C232
C233
C237
C238
XUUBEN
XULBEN
XLUBEN
XLLBEN
XWRD
XBCYST
XCS4
CPU_CLK
XTC
GDC_DMAACK
C242
GDC_INT
GDC_DMARQ
R229 56
GDC_WTO
R238 33
GDC_WT
R237 100K
R240 100K
C243
C244
C245
C246
C247
C248
BD0
BD1
BD2
BD3
BD4
BD5
BD6
BD7
BD8
BD9
BD10
BD11
BD12
BD13
BD14
BD15
BD16
BD17
BD18
BD19
BD20
BD21
BD22
BD23
BD24
BD25
BD26
BD27
BD28
BD29
BD30
BD31
E 5/6
FSC
OVER
AOUTRED
AOUTGREEN
AOUTBLUE
OUTCSYNC
RST3
GNDV
GNDD
GDC2.5C
VCC2.5
L206
C252 10/10
C228
C234
C235
C239
C240
C241
R227 100K
R228 100K
R230 100K
R232 100K
R224 0R0
MODE0
MODE1
MODE2

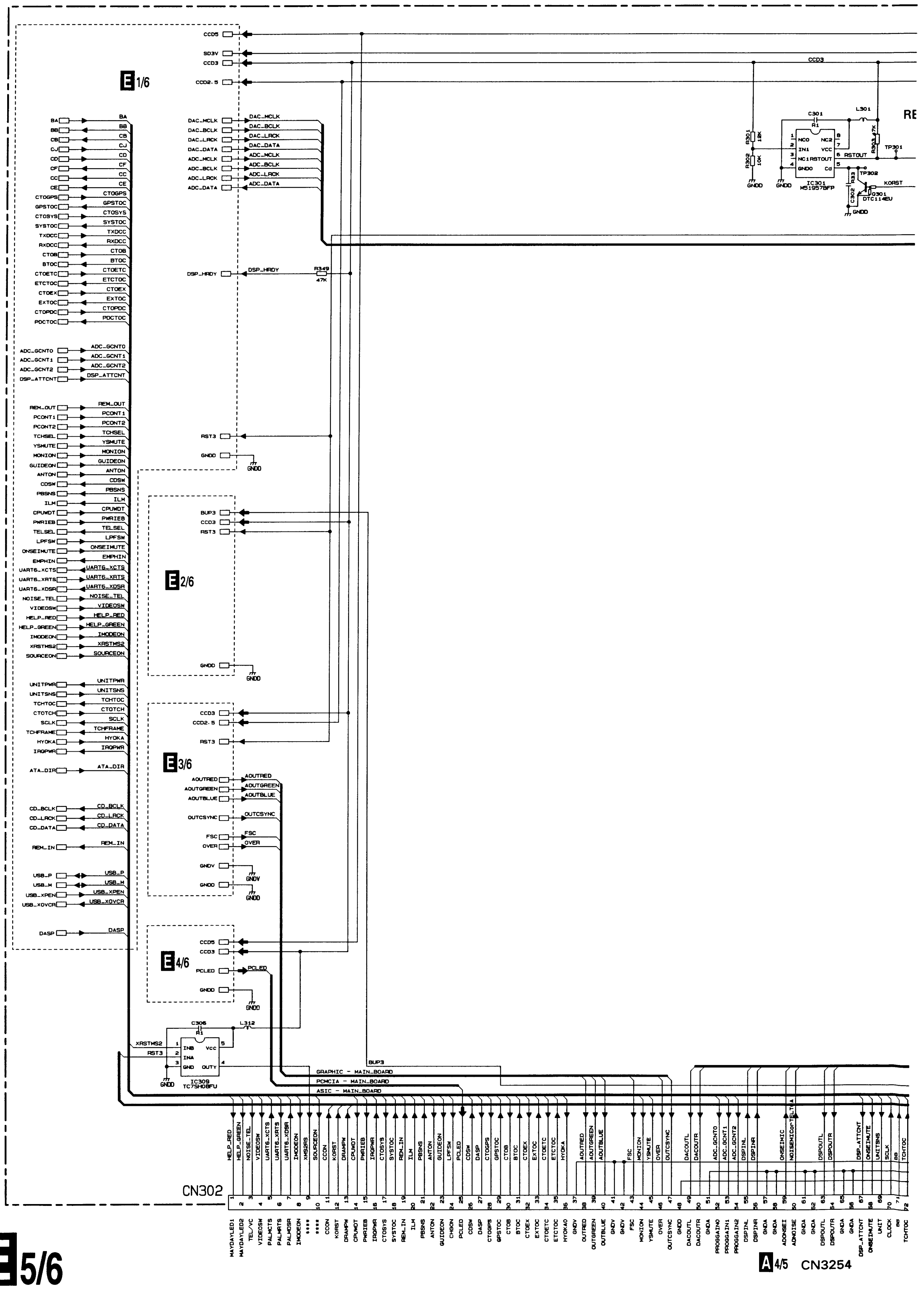
3.14 CC UNIT 4/6 (PC CARD)


E 4/6 CC UNIT(PC CARD)
5V←3.3V
CN901
PC CARD
EF901
PCS5
GNDD
IC901 TC74VHCT541AFT
IC902 TC74VHCT541AFT
IC903 TC74VHCT541AFT
IC904 TC74VHCT541AFT
IC908 TC74VHC541FT
L901
L902
L903
L904
L905
L906
L907
C901
C902
C903
C904
C905
C906
C907
C908
R903 100
R904 100
R905 100
R906 100
R907 100
R908 100
R910 100
R911 100
R912 100
R913 100
R914 100
R915 100
R916 100
R917 100
R918 100
R919 100
R920 100
R921 100
R922 100
R923 47K
R924 47K
R925 47K
R926 100
R927 100
PC_XCD1
PC_XCD2
PC_XVS1
PC_XVS2
PC_IORDC
PC_IOWRC
PC_WEBC
PC_OEC
PC_RESETC
PC_WTC
PC_A0C
RDBSC
REGC
BVD1C
BVD2C
IO16WPC
CE1C
CE2C
PC_XREG
PC_XWE
PC_XOE
PC_XIOWR
PC_XIORD
PC_XCE2
PC_XCE1
PC_A0
SWDPC
5V→3.3V


5V↔3.3V
L905
IC905
VCC VCCB1
DIR VCCB0
A1 A2 A3 A4 A5 A6 A7 A8
GND0 GND1 GND2
B1 B2 B3 B4 B5 B6 B7 B8
C905 R1
C909 R1
TC74LVX4245FS
GNDD
L909
CCD3CARD
PC3
EF902
CCD3
R/W
GNDD
BD0 BD1 BD2 BD3 BD4 BD5 BD6 BD7
L906
IC906
C906 R1
C910 R1
L910
BD8 BD9 BD10 BD11 BD12 BD13 BD14 BD15
L907
IC907
C907 R1
C911 R1
L911
PC_A0
BA1 BA2 BA3 BA4 BA5 BA6 BA7 BA8 BA9 BA10 BA11 BA12 BA13 BA14 BA15 BA16 BA17 BA18 BA19 BA20 BA21 BA22 BA23
PC_XLBUF
PC_XUBUF
EF903
PC5CARD
PC5
CCD5
E 1/6
E 2/6
E 5/6
SWDPC5CARD
L908
C908
VCC XG2 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
PC_WP
PC_BVD1
PC_BVD2
PC_READY
PC_XWT
PC_XREG
PC_XWE
PC_XOE
PC_XIOWR
PC_XIORD
PC_XCE2
PC_XCE1
Q901
2SA1797
R934 10K
R933 27
R937 27
R938 27
R939 27
C912 R1
C913 R1
PC CARD POWER SW
Q902
2SC2712
R936 10K
Q903
DTA114EU
R935 4R7K
R33
C914
R929 R930 R931 R932 100K
3.3V
PCLED
PC_XPWR
PC_RESET
PC_XCD1
PC_XCD2
PC_XVS2
PC_XVS1

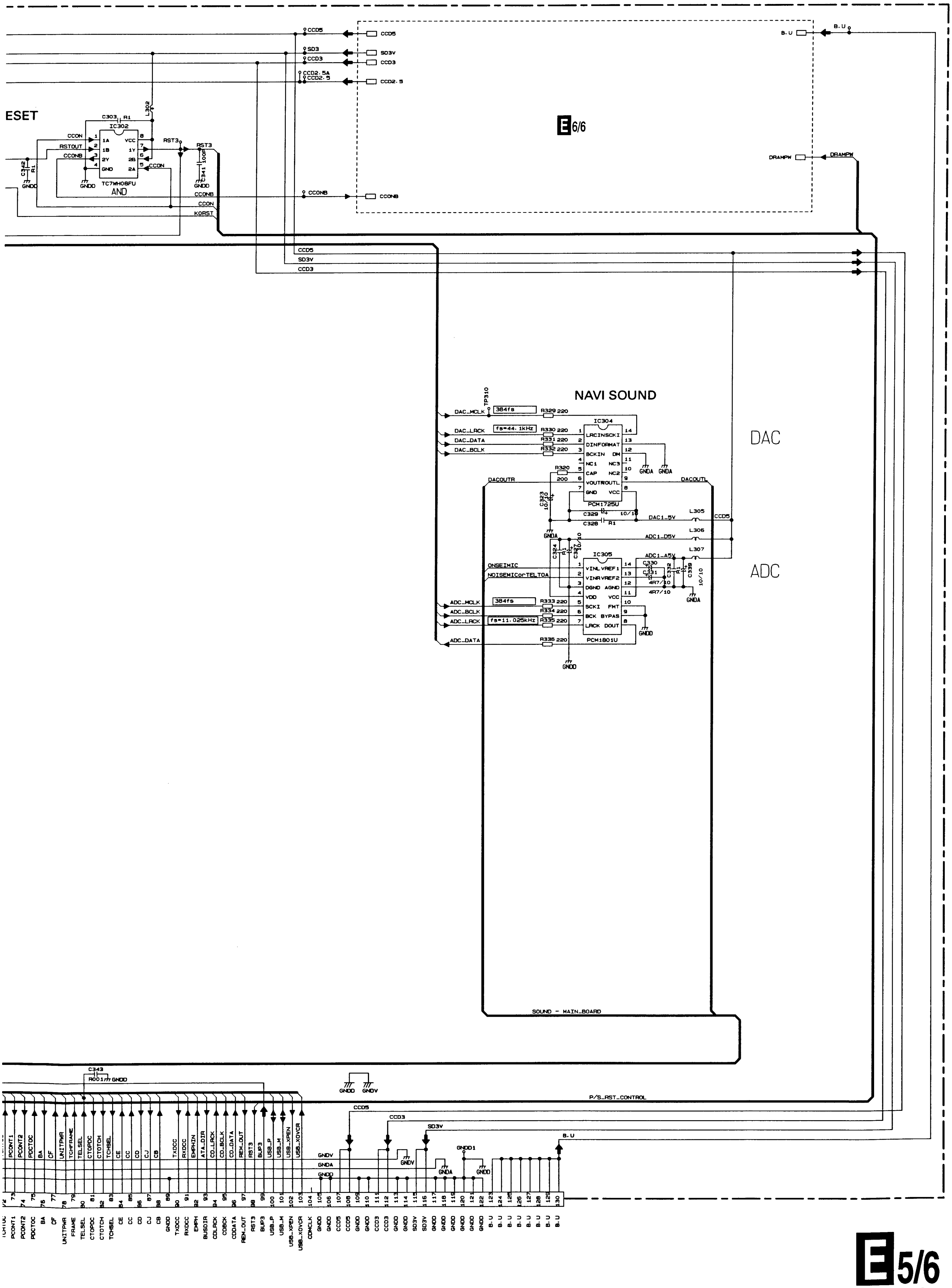
3.15 CC UNIT 5/6 (DSP, I/F CONNECTOR)(GUIDE PAGE)

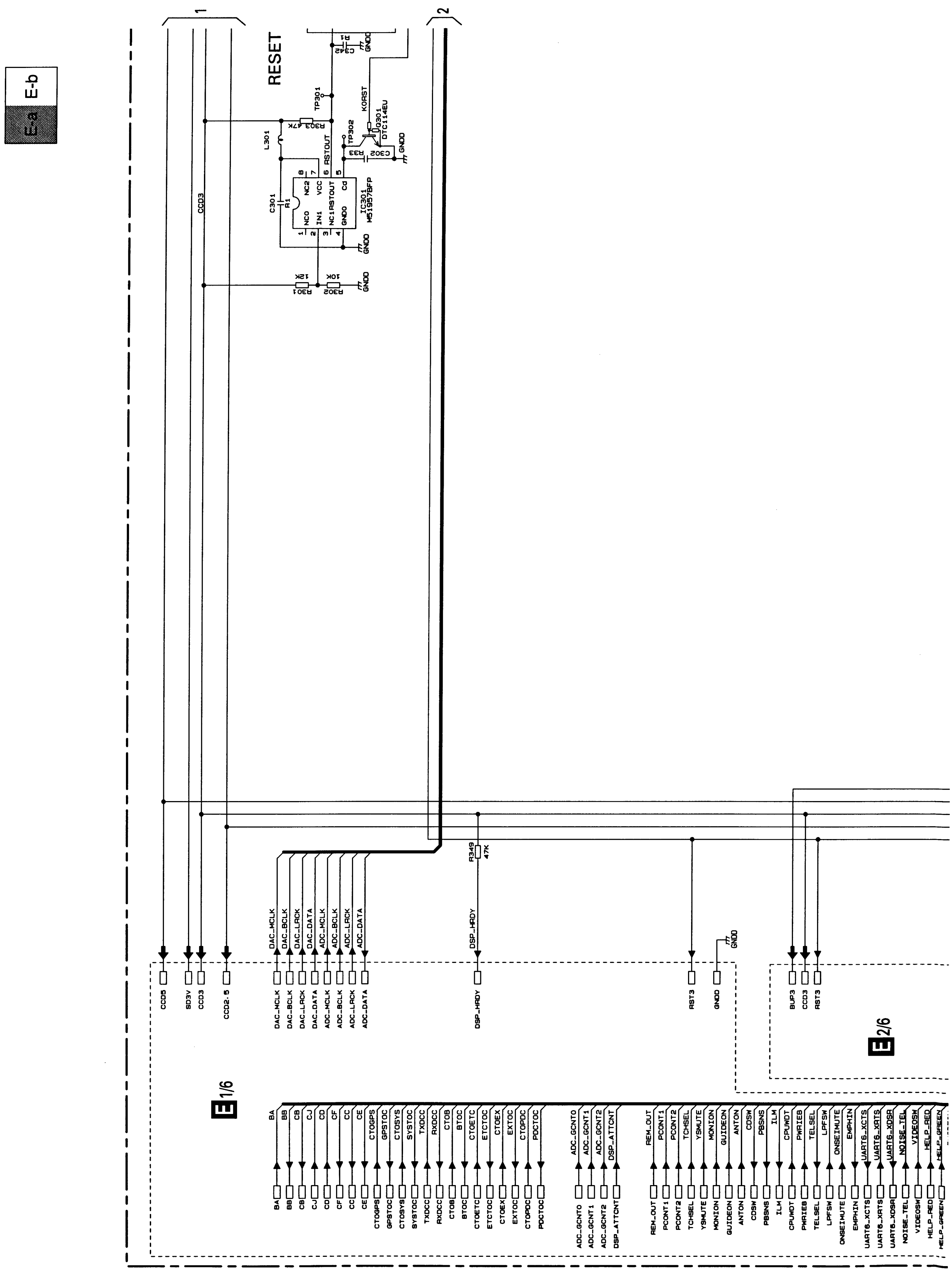
E-a 5/6

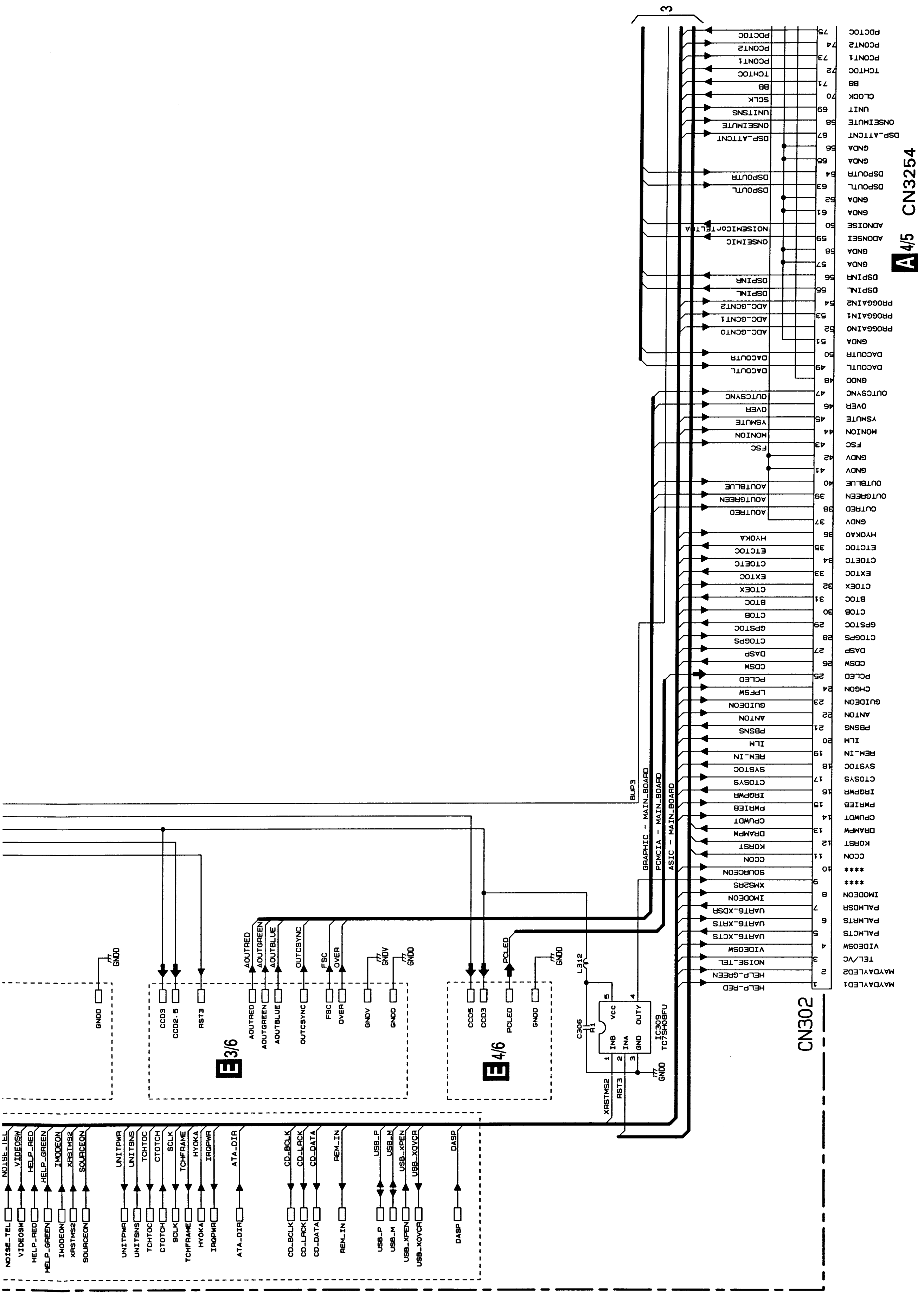

E 1/6
CCD5
SD3V
CCD3
CCD2.5
DAC_MCLK
DAC_BCLK
DAC_LRCK
DAC_DATA
ADC_MCLK
ADC_BCLK
ADC_LRCK
ADC_DATA
DSP_HRDY
R349 47K
RST3
GNDD
BA
BB
CB
CJ
CD
CF
CC
CE
CTOGPS
GPSTOC
CTOSYS
SYSTOC
TXDCC
RXDCC
CTOB
BTOC
CTOETC
ETCTOC
CTOEX
EXTOC
CTOPDC
PDCTOC
ADC_GCNT0
ADC_GCNT1
ADC_GCNT2
DSP_ATTCNT
REM_OUT
PCONT1
PCONT2
TCHSEL
YSMUTE
MONION
GUIDEON
ANTON
CDSW
PBSNS
ILM
CPUWDT
PWRIEB
TELSEL
LPFSW
ONSEIMUTE
EMPHIN
UART6_XCTS
UART6_XRTS
UART6_XDSR
NOISE_TEL
VIDEOSW
HELP_RED
HELP_GREEN
IMODEON
XRSTMS2
SOURCEON
UNITPWR
UNITSNS
TCHTOC
CTOTCH
SCLK
TCHFRAME
HYOKA
IRQPWR
ATA_DIR
CD_BCLK
CD_LRCK
CD_DATA
REM_IN
USB_P
USB_M
USB_XPEN
USB_XOVCR
DASP
E 2/6
BUP3
E 3/6
AOUTRED
AOUTGREEN
AOUTBLUE
OUTCSYNC
FSC
OVER
GNDV
E 4/6
PCLED
C306
R1
L312
IC309
TC7SH08FU
INB
INA
GND
VCC
OUTY
GRAPHIC - MAIN_BOARD
PCMCIA - MAIN_BOARD
ASIC - MAIN_BOARD
C301
L301
R301 12K
R302 10K
R303 47K
IC301
M51957BFP
NC0
IN1
NC1
GND0
NC2
VCC
RSTOUT
Cd
RSTOUT
TP301
TP302
C302
R33
Q301
DTC114EU
KORST
RE
CN302
MAYDAYLED1
MAYDAYLED2
TEL/VC
VIDEOSW
UART6_XCTS
PALMRTS
PALMDSR
IMODEON
XRSTMS2
SOURCEON
CCON
KORST
DRAMPW
CPUWDT
PWRIEB
IRQPWR
CTOSYS
SYSTOC
REM_IN
ILM
PBSNS
ANTON
GUIDEON
CHOON
PCLED
CDSW
DASP
CTOGPS
GPSTOC
CTOB
BTOC
CTOEX
EXTOC
CTOETC
ETCTOC
HYOKA
GNDV
OUTRED
OUTGREEN
OUTBLUE
GNDV
FSC
MONION
YSMUTE
OVER
OUTCSYNC
GNDD
DACOUTL
DACOUTR
GNDA
PROGGAIN0
PROGGAIN1
PROGGAIN2
DSPINL
DSPINR
GNDA
ADONSEI
ADNOISE
GNDA
DSPOUTL
DSPOUTR
GNDA
DSP_ATTCNT
ONSEIMUTE
UNIT
CLOCK
BB
TCHTOC
NOISEMICorTEL_A
ONSEIMIC
A 4/5 CN3254

E-b 5/6

E 5/6 CC UNIT(DSP,I/F CONNECTOR)

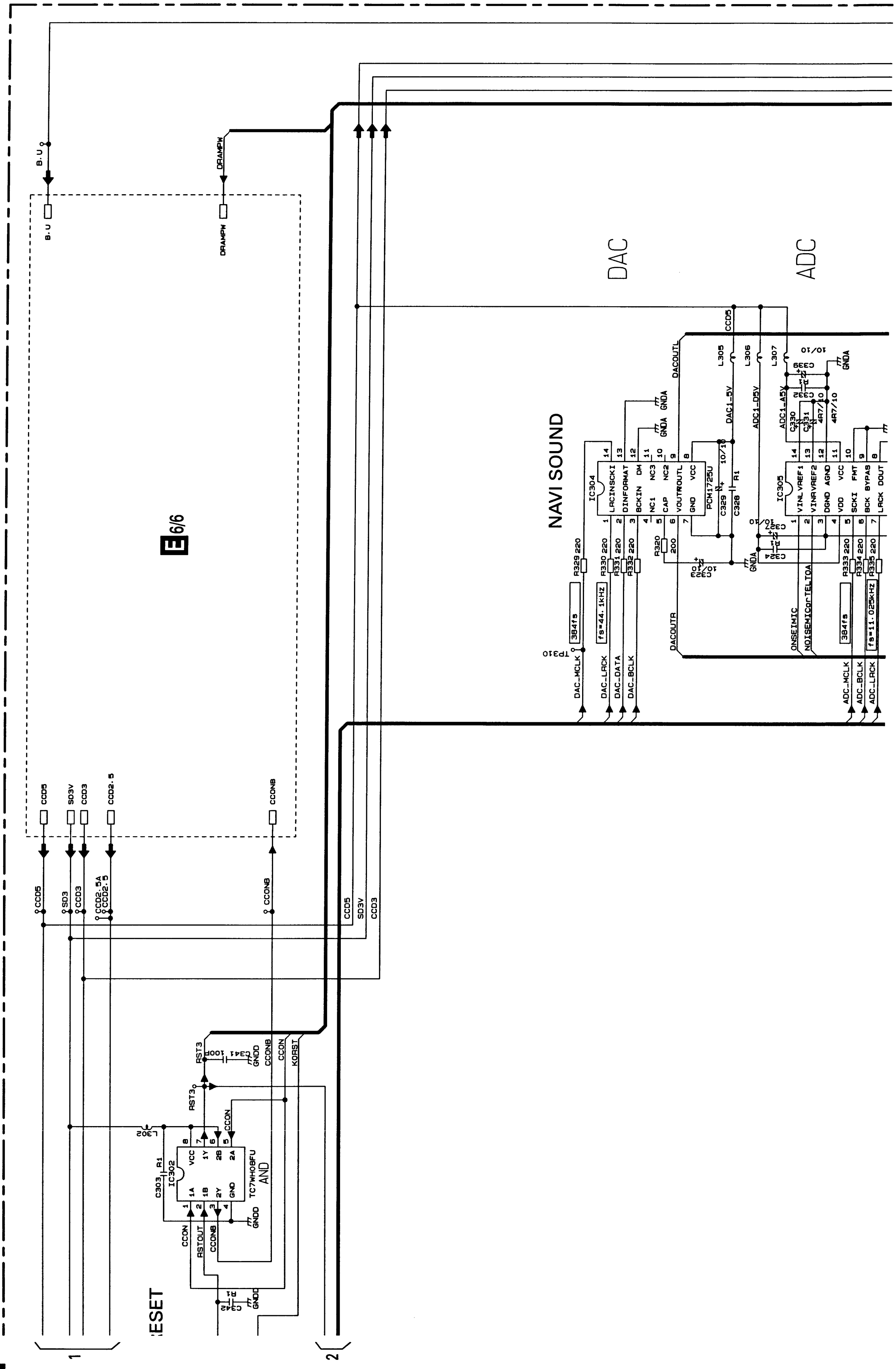

ESET
C303 R1
IC302
L302
CCON
RSTOUT
CCONB
1A 1B 2Y GND VCC 1Y 2B 2A
RST3
100P
C341
C342 R1
GNDD
TC7WH08FU
AND
CCONB
CCON
KORST
CCD5
SD3
CCD3
CCD2.5A
CCD2.5
SD3V
E 6/6
B.U
DRAMPW
CCD5
SD3V
CCD3
NAVI SOUND
TP310
DAC_MCLK
384fs
R329 220
DAC_LRCK
fs=44.1kHz
R330 220
DAC_DATA
R331 220
DAC_BCLK
R332 220
IC304
LRCIN SCKI
DIN FORMAT
BCKIN DM
NC1 NC3
CAP NC2
VOUTR VOUTL
GND VCC
PCM1725U
R320
200
DACOUTR
DACOUTL
GNDA
C323 10/10
C329
10/10
C328 R1
DAC1_5V
L305
CCD5
DAC
ADC1_D5V
L306
L307
ADC1_A5V
C324 R1
C327 10/10
IC305
VINL VREF1
VINR VREF2
DGND AGND
VDD VCC
SCKI FMT
BCK BYPAS
LRCK DOUT
PCM1801U
ONSEIMIC
NOISEMICorTELTOA
C330
C331
4R7/10
4R7/10
C332 R1
C339
10/10
ADC
ADC_MCLK
384fs
R333 220
ADC_BCLK
R334 220
ADC_LRCK
fs=11.025kHz
R335 220
ADC_DATA
R336 220
GNDD
SOUND - MAIN_BOARD
C343
R001
GNDD
GNDV
P/S_RST_CONTROL
PCONT1 PCONT2 PDCTOC BA CF UNITPWR TCHFRAME TELSEL CTOPDC CTOTCH TCHSEL CE CC CD CJ CB TXDCC RXDCC EMPHIN ATA_DIR CD_LRCK CD_BCLK CD_DATA REM_OUT RST3 BUP3 USB_P USB_M USB_XPEN USB_XOVCR
CCD5
CCD3
SD3V
B.U
GNDV
GNDA
GNDD
GNDD1
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130
TCHTOC PCONT1 PCONT2 PDCTOC BA CF UNITPWR FRAME TELSEL CTOPDC CTOTCH TCHSEL CE CC CD CJ CB GNDD TXDCC RXDCC EMPH BUSDIR CDLRCK CDBCK CDDATA REM_OUT RST3 BUP3 USB_P USB_M USB_XPEN USB_XOVCR COMCLK GNDD GNDD CCD5 CCD5 GNDD GNDD CCD3 CCD3 GNDD GNDD SD3V SD3V GNDD GNDD GNDD GNDD GNDD GNDD B.U B.U B.U B.U B.U B.U B.U B.U

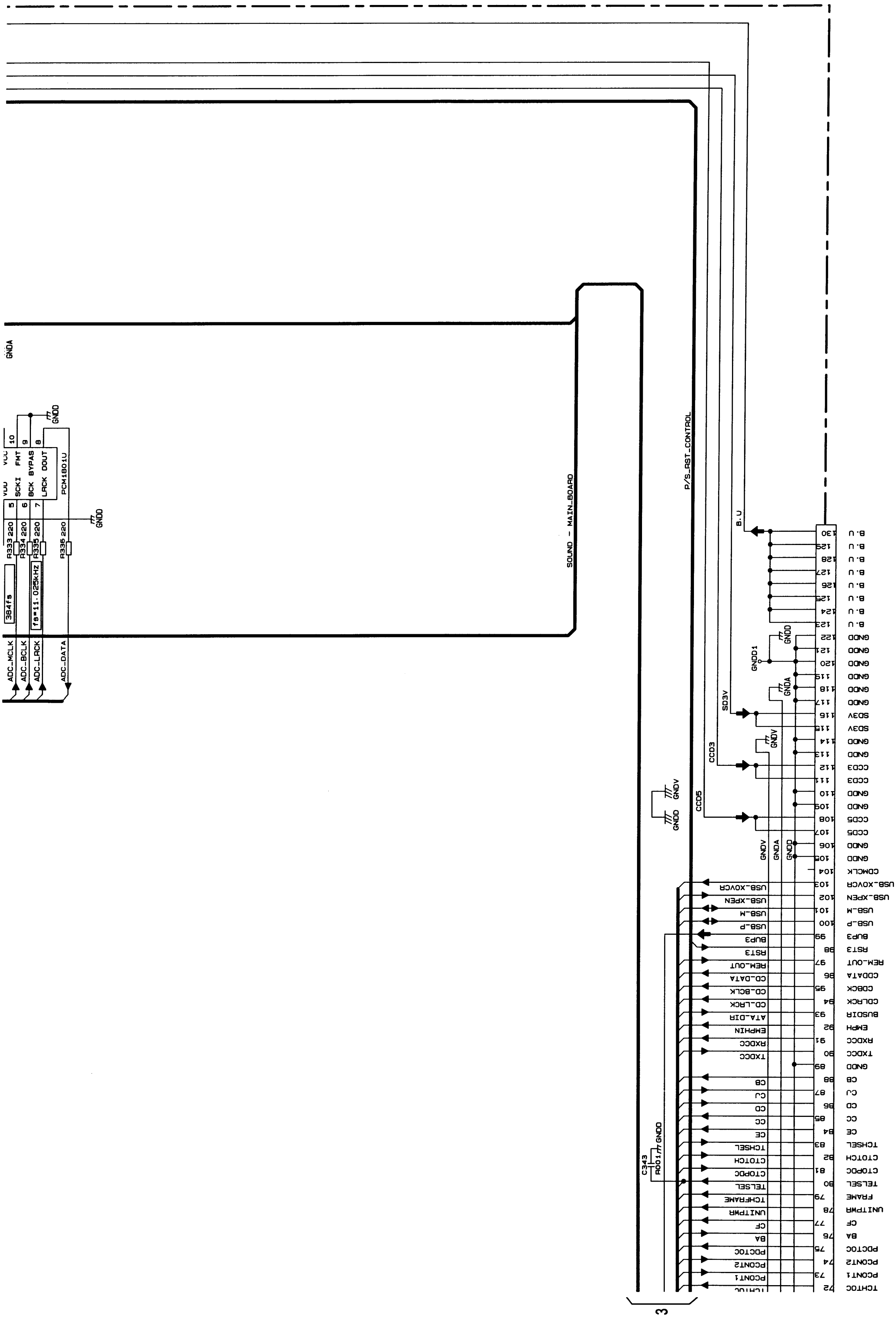

E-b
E-a
1
2
RESET
C342 R1
GNDD
TP301
KORST
R303 47K
L301
RSTOUT
TP302
Q301 DTC114EU
R33 C302
GNDD
C301 R1
NC0 IN1 NC1 RSTOUT GNDD
NC2 VCC RSTOUT Cd
1 2 3 4 5 6 7 8
IC301 M51957BFP
CCD3
R301 12K
R302 10K
A
B
C
D
R349 47K
DAC_MCLK
DAC_BCLK
DAC_LRCK
DAC_DATA
ADC_MCLK
ADC_BCLK
ADC_LRCK
ADC_DATA
DSP_HRDY
GNDD
CCD5
SD3V
CCD3
CCD2.5
RST3
GNDD
BUP3
CCD3
RST3
E 2/6
E 1/6
BA
BB
CB
CJ
CD
CF
CC
CE
CTOGPS
GPSTOC
CTOSYS
SYSTOC
TXDCC
RXDCC
CTOB
BTOC
CTOETC
ETCTOC
CTOEX
EXTOC
CTOPDC
PDCTOC
ADC_GCNT0
ADC_GCNT1
ADC_GCNT2
DSP_ATTCNT
REM_OUT
PCONT1
PCONT2
TCHSEL
YSMUTE
MONION
GUIDEON
ANTON
CDSW
PBSNS
ILM
CPUWDT
PWRIEB
TELSEL
LPFSW
ONSEIMUTE
EMPHIN
UART6_XCTS
UART6_XRTS
UART6_XDSR
NOISE_TEL
VIDEOSW
HELP_RED
HELP_GREEN


3
CN3254
A 4/5
PDCTOC 75
PCONT2 74
PCONT1 73
TCHTOC 72
BB 71
CLOCK 70
UNIT 69
ONSEIMUTE 68
DSP-ATCNT 67
GNDA 66
GNDA 65
DSPOUTR 64
DSPOUTL 63
GNDA 62
GNDA 61
ADNOISE 60
ADONSEI 59
GNDA 58
GNDA 57
DSPINR 56
DSPINL 55
PROGGAIN2 54
PROGGAIN1 53
PROGGAIN0 52
GNDA 51
DACOUTR 50
DACOUTL 49
GNDD 48
OUTCSYNC 47
OVER 46
YSMUTE 45
MONION 44
FSC 43
GNDV 42
GNDV 41
OUTBLUE 40
OUTGREEN 39
OUTRED 38
GNDV 37
HYOKAO 36
ETCTOC 35
CTOETC 34
EXTOC 33
CTOEX 32
BTOC 31
CTOB 30
GPSTOC 29
CTOGPS 28
DASP 27
CDSW 26
PCLED 25
CHGON 24
GUIDEON 23
ANTON 22
PBSNS 21
ILM 20
REM-IN 19
SYSTOC 18
CTOSYS 17
IRQPWR 16
PWRIEB 15
CPUMDT 14
DRAMPW 13
KORST 12
CCON 11
**** 10
**** 9
IMODEON 8
PALMDSR 7
PALMRTS 6
PALMCTS 5
VIDEOSW 4
TEL/VC 3
MAYDAYLED2 2
MAYDAYLED1 1
PDCTOC
PCONT2
PCONT1
TCHTOC
BB
SCLK
UNITSNS
ONSEIMUTE
DSP-ATCNT
DSPOUTR
DSPOUTL
NOISEMICorTEL
ONSEIMIC
DSPINR
DSPINL
ADC-GCNT2
ADC-GCNT1
ADC-GCNT0
DACOUTR
DACOUTL
OUTCSYNC
OVER
YSMUTE
MONION
FSC
AOUTBLUE
AOUTGREEN
AOUTRED
HYOKA
ETCTOC
CTOETC
EXTOC
CTOEX
BTOC
CTOB
GPSTOC
CTOGPS
DASP
CDSW
PCLED
LPFSW
GUIDEON
ANTON
PBSNS
ILM
REM_IN
SYSTOC
CTOSYS
IRQPWR
PWRIEB
CPUMDT
DRAMPW
KORST
CCON
SOURCEON
XMS2RS
IMODEON
UARTG_XDSR
UARTG_XRTS
UARTG_XCTS
VIDEOSW
NOISE_TEL
HELP_GREEN
HELP_RED
CN302
BUP3
GRAPHIC - MAIN_BOARD
PCMCIA - MAIN_BOARD
ASIC - MAIN_BOARD
L312
C306
R1
IC309
TC7SH08FU
Vcc
OUTY
INB
INA
GND
XRSTMS2
RST3
GNDD
GNDD
CCD3
CCD2.5
RST3
AOUTRED
AOUTGREEN
AOUTBLUE
OUTCSYNC
FSC
OVER
GNDV
GNDD
E 3/6
CCD5
CCD3
PCLED
GNDD
E 4/6
NOISE_TEL
VIDEOSW
HELP_RED
HELP_GREEN
IMODEON
XRSTMS2
SOURCEON
UNITPWR
UNITSNS
TCHTOC
CTOTCH
SCLK
TCHFRAME
HYOKA
IRQPWR
ATA_DIR
CD_BCLK
CD_LRCK
CD_DATA
REM_IN
USB_P
USB_M
USB_XPEN
USB_XOVCR
DASP

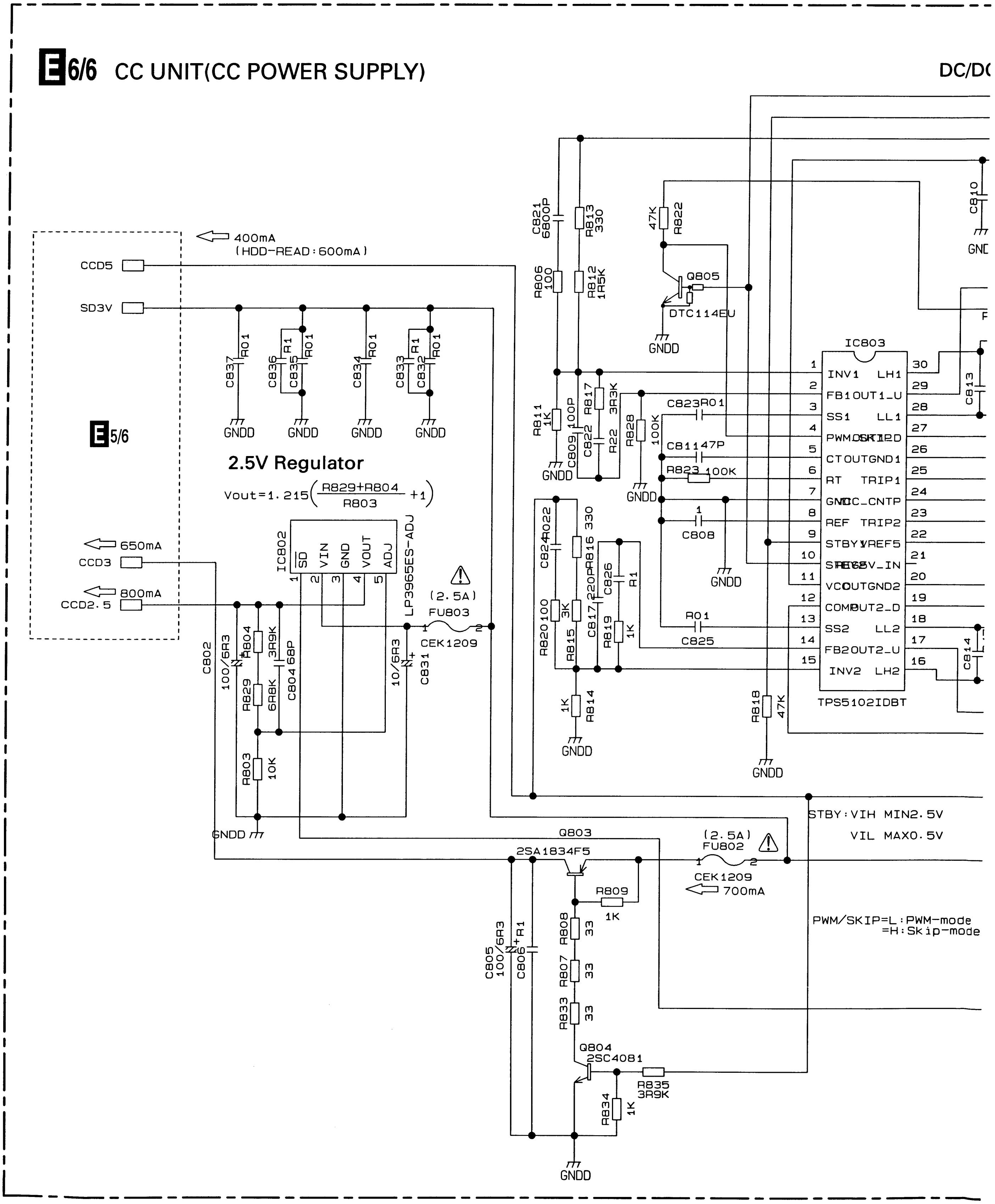
E-b
E-a

E 5/6 CC UNIT(DSP,I/F CONNECTOR)

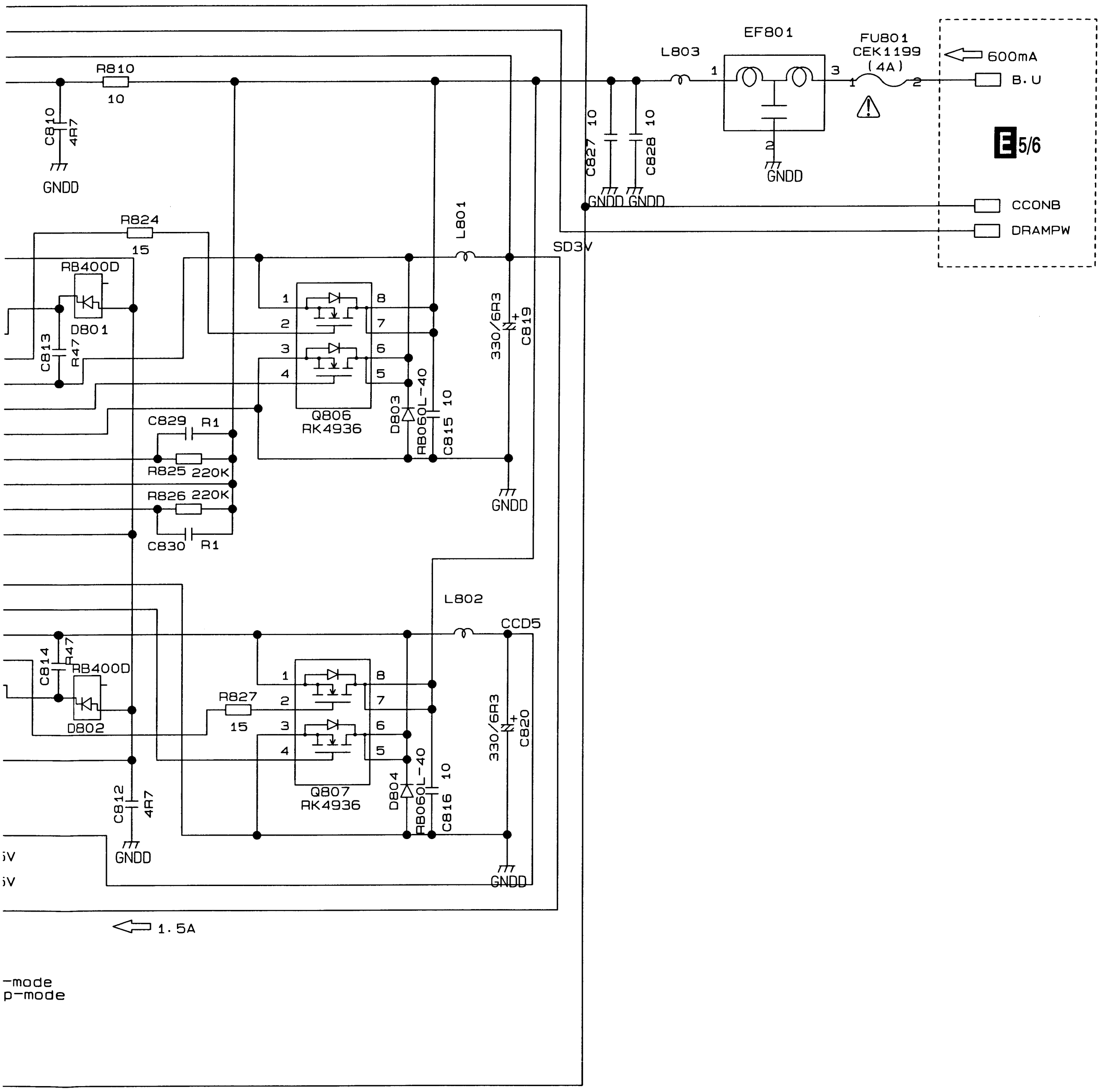

B.U
DRAMPW
E 6/6
DAC
ADC
NAVI SOUND
IC304
PCM1725U
LRCINSCKI
DINFORMAT
BCKIN DM
NC1 NC3
CAP NC2
VOUTR VOUTL
GND VCC
IC305
VINL VREF1
VINR VREF2
DGND AGND
VDD VCC
SCKI FMT
BCK BYPAS
LRCK DOUT
DACOUTL
DACOUTR
DAC1-5V
ADC1-D5V
ADC1-A5V
L305
L306
L307
C339 10/10
C332
C330
C331
4R7/10
C329 10/10
C328
R1
R320 200
C323 10/10
C327 10/10
C324
GNDA
R329 220
R330 220
R331 220
R332 220
R333 220
R334 220
R335 220
384fs
fs=44.1kHz
fs=11.025kHz
TP310
DAC_MCLK
DAC_LRCK
DAC_DATA
DAC_BCLK
ONSEIMIC
NOISEMICorTELTOA
ADC_MCLK
ADC_BCLK
ADC_LRCK
CCD5
SD3V
CCD3
CCD2.5
CCD2.5A
SD3
CCONB
CCON
KORST
RST3
C341 100P
GNDD
L302
C303
IC302
TC7WH08FU
AND
VCC 1Y 2B 2A
1A 1B 2Y GND
RSTOUT
C342
RESET
1
2


GNDA
GNDD
PCM1801U
VDD VCC
SCKI FMT
BCK BYPAS
LRCK DOUT
5 6 7 8 9 10
R333 220
R334 220
R335 220
R336 220
384fs
fs=11.025kHz
ADC_MCLK
ADC_BCLK
ADC_LRCK
ADC_DATA
SOUND - MAIN_BOARD
P/S_RST_CONTROL
B.U
SD3V
CCD3
CCD5
GNDD1
GNDV
GNDA
GNDD
USB-XOVCR
USB-XPEN
USB-M
USB-P
BUP3
RST3
REM-OUT
CD-DATA
CD-BCLK
CD-LRCK
ATA-DIR
EMPHIN
RXDCC
TXDCC
CB
CJ
CD
CC
CE
TCHSEL
CTOTCH
CTOPDC
TELSEL
TCHFRAME
UNITPWR
CF
BA
PDCTOC
PCONT2
PCONT1
TCHTOC
C343
R001
3

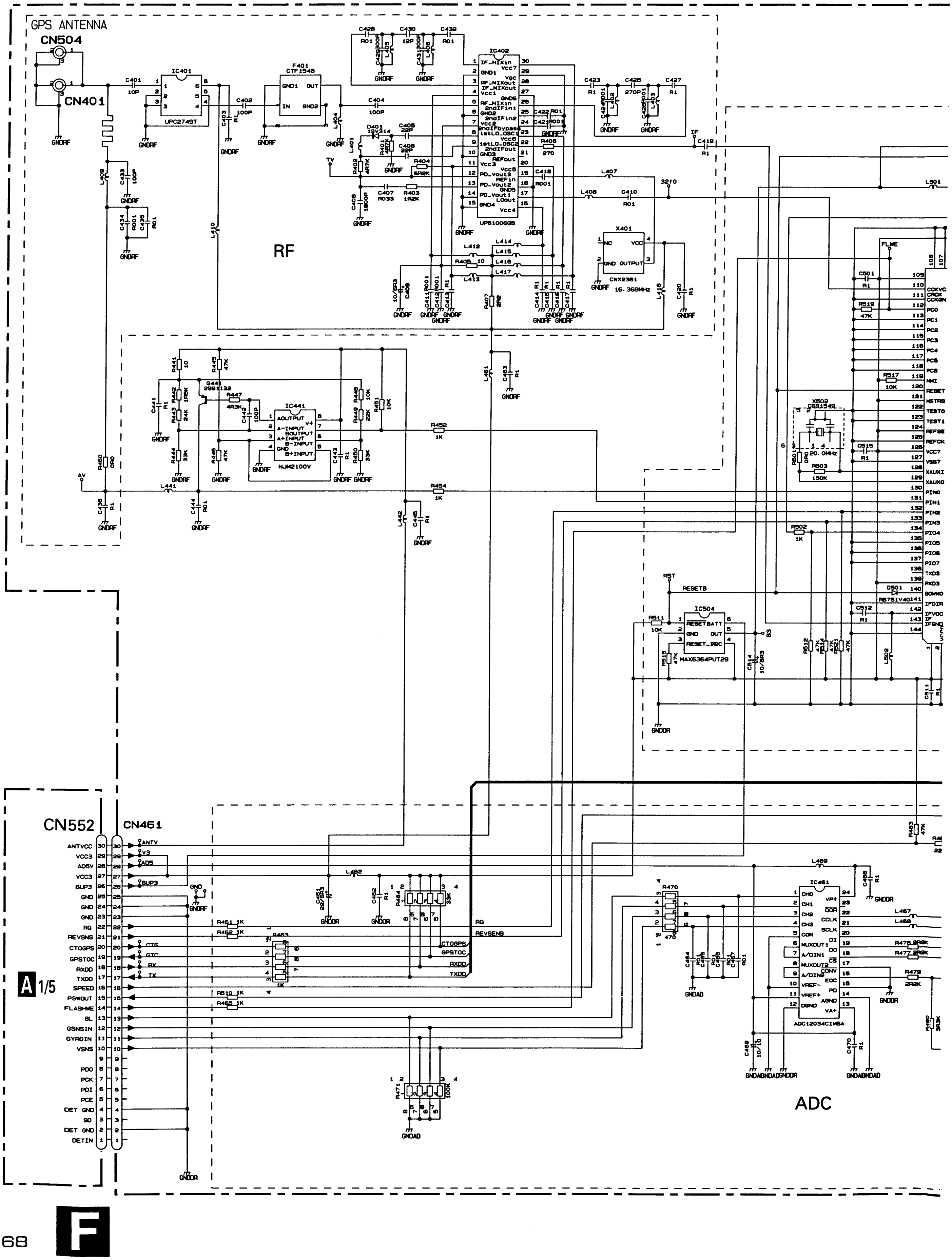
3.16 CC UNIT 6/6 (CC POWER SUPPLY)


E 6/6 CC UNIT(CC POWER SUPPLY)
DC/D
A
B
C
D
E 5/6
CCD5
SD3V
CCD3
CCD2.5
400mA
(HDD-READ:600mA)
650mA
800mA
C837 R01
C836 R1 C835 R01
C834 R01
C833 R1 C832 R01
GNDD
2.5V Regulator
Vout=1.215(R829+R804 / R803 +1)
IC802
LP3965ES-ADJ
SD VIN GND VOUT ADJ
1 2 3 4 5
(2.5A)
FU803
CEK1209
C802 100/6R3
R804 3R9K
C804 68P
R829 6R8K
R803 10K
C831 10/6R3
C821 6800P
R813 330
R806 100
R812 1R5K
R811 1K
C809 100P
R817 3R3K
C822 R22
R828 100K
47K R822
Q805
DTC114EU
C823 R01
C811 47P
R823 100K
C808 1
C824 R022
R816 330
C826 R1
R820 100
R815 3K
C817 220P
R819 1K
C825 R01
R814 1K
R818 47K
IC803
TPS5102IDBT
1 INV1 LH1 30
2 FB1 OUT1_U 29
3 SS1 LL1 28
4 PWM/SKIP OUT1_D 27
5 CT OUTGND1 26
6 RT TRIP1 25
7 GND DC_CNTP 24
8 REF TRIP2 23
9 STBY VREF5 22
10 STBY1 REG5V_IN 21
11 VCC OUTGND2 20
12 COMP OUT2_D 19
13 SS2 LL2 18
14 FB2 OUT2_U 17
15 INV2 LH2 16
C810
C813
C814
GNE
STBY:VIH MIN2.5V
VIL MAX0.5V
PWM/SKIP=L:PWM-mode
=H:Skip-mode
Q803
2SA1834F5
(2.5A)
FU802
CEK1209
700mA
R809 1K
R808 33
R807 33
R833 33
C805 100/6R3
C806 R1
Q804
2SC4081
R835 3R9K
R834 1K

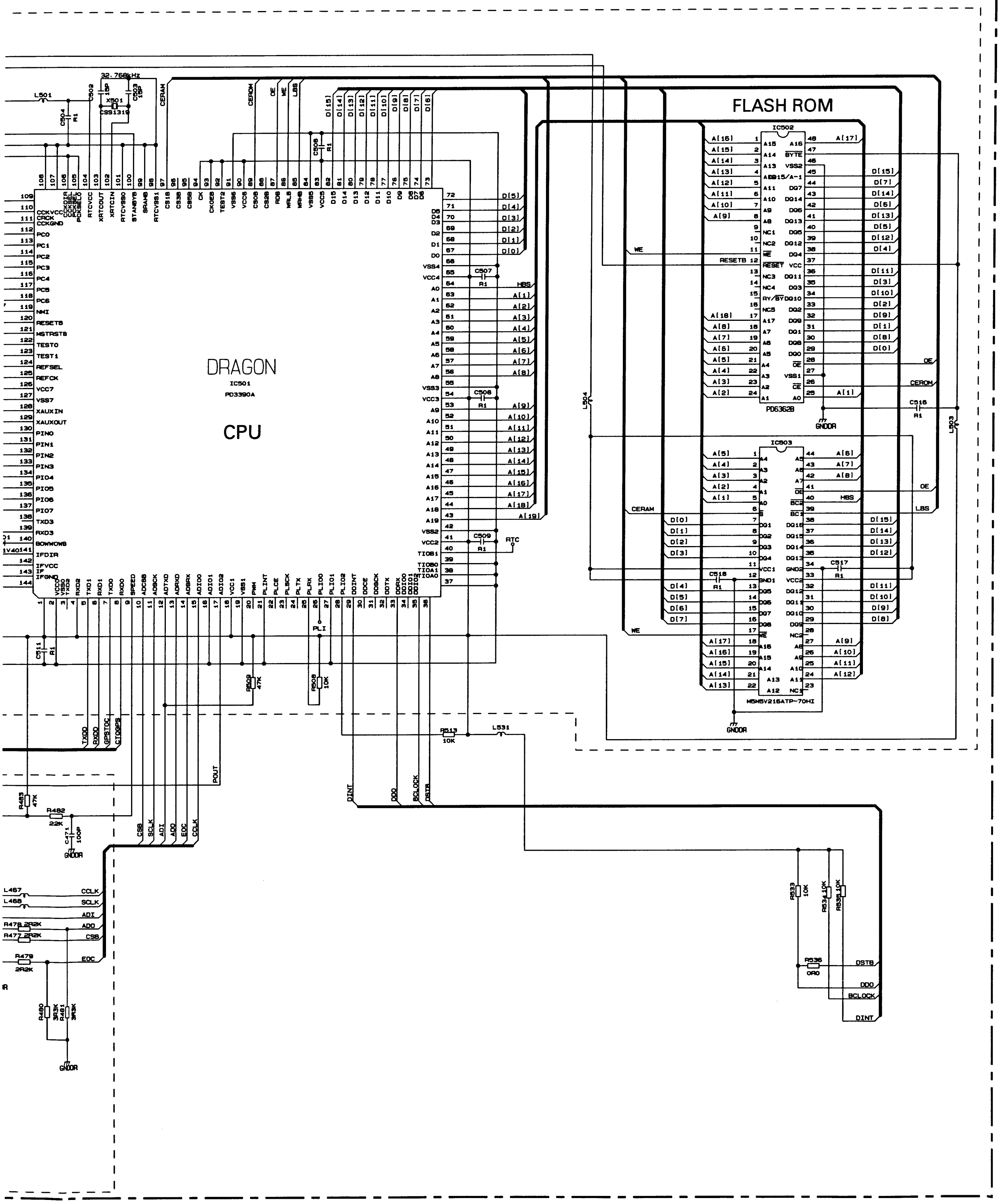
DC/DC Converter $\left.\begin{matrix}3.3V\\5V\end{matrix}\right)$ 2ch


R810
10
C810
4R7
GNDD
R824
15
RB400D
D801
C813
R47
Q806
RK4936
1
2
3
4
8
7
6
5
D803
RB060L-40
C815
10
C829
R1
R825
220K
R826
220K
C830
R1
L801
330/6R3
C819
GNDD
SD3V
C827
10
C828
10
GNDD
GNDD
L803
EF801
1
2
3
GNDD
FU801
CEK1199
(4A)
1
2
600mA
B.U
E 5/6
CCONB
DRAMPW
L802
CCD5
C814
R47
RB400D
D802
R827
15
Q807
RK4936
D804
RB060L-40
C816
10
330/6R3
C820
C812
4R7
GNDD
GNDD
5V
5V
1.5A
-mode
p-mode

3.17 GPS UNIT

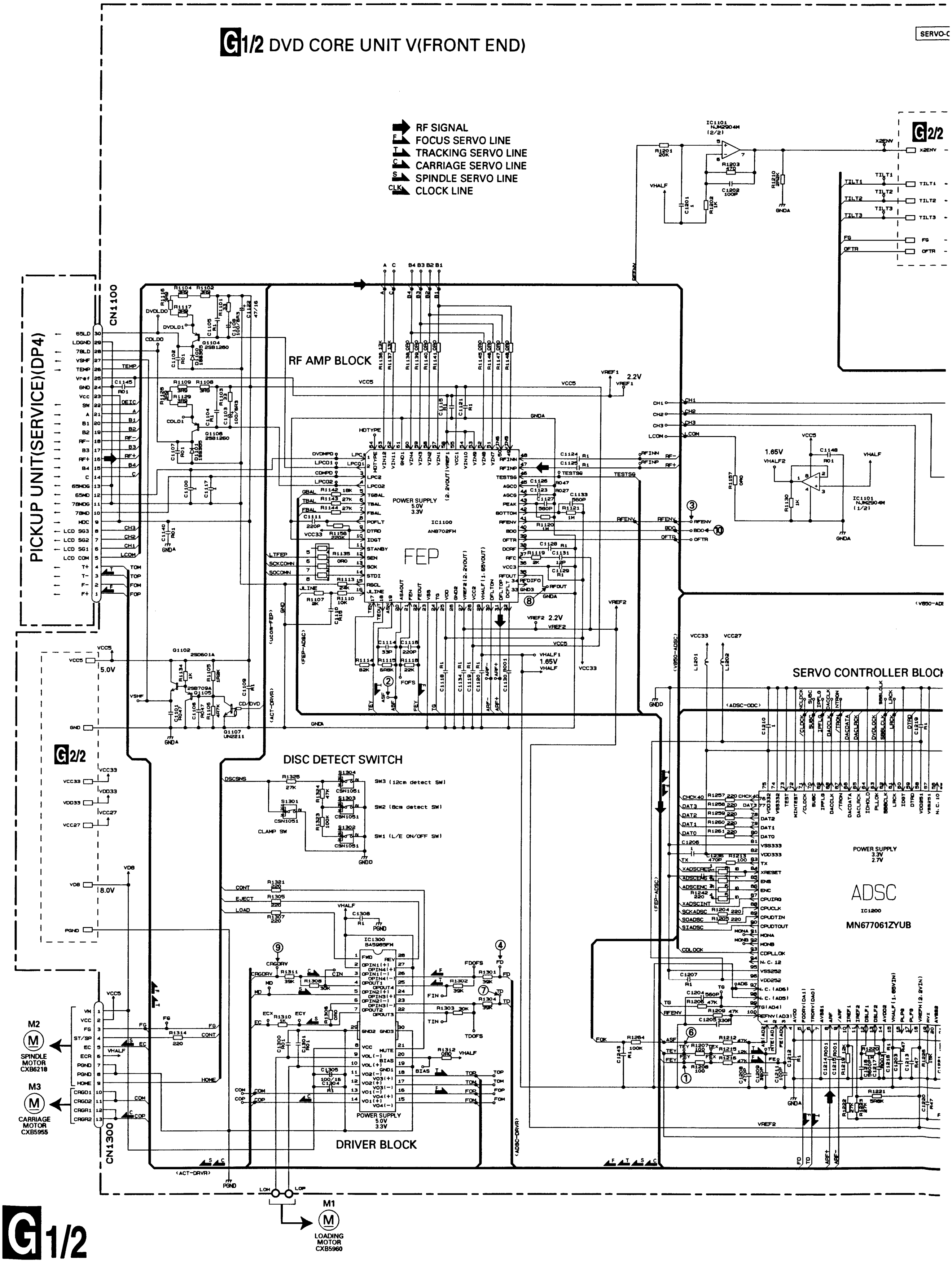

A
B
C
D
GPS ANTENNA
CN504
CN401
IC401
UPC2749T
F401
CTF1548
IC402
UPB1006GS
X401
CWX2381
16.368MHz
RF
IC441
NJM2100V
Q441
2SB1132
IC504
MAX6364PUT29
X502
CSB1549
20.0MHz
CN552
CN461
A 1/5
IC461
ADC12034CIMSA
ADC
ANTVCC
VCC3
AD5V
BUP3
GND
RQ
REVSNS
CTOGPS
GPSTOC
RXDD
TXDD
SPEED
PSWOUT
FLASHWE
SL
GSNSIN
GYROIN
VSNS
PDO
PCK
PDI
PCE
DET GND
SD
DETIN
GNDRF
GNDDR
GNDAD

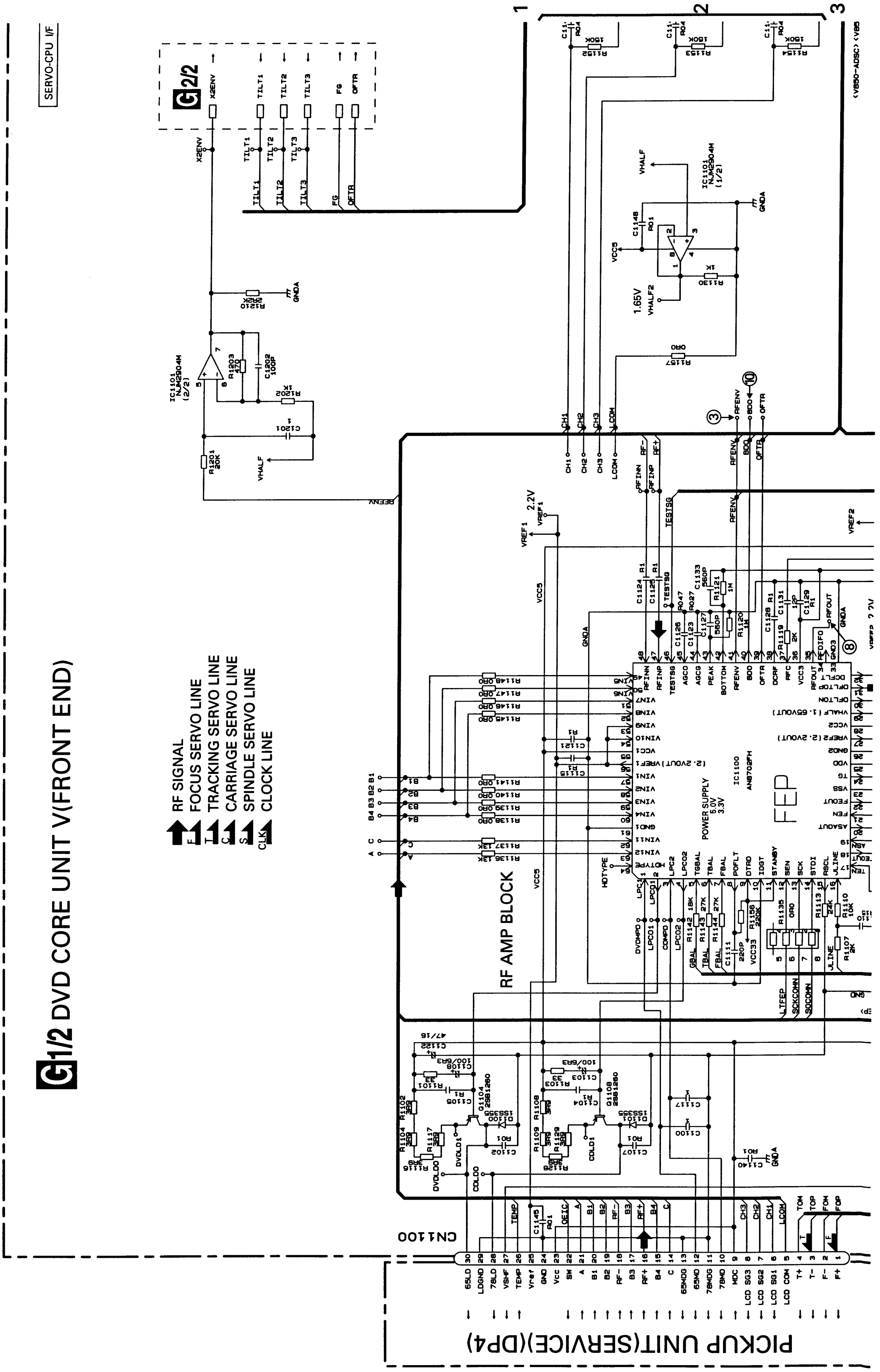
F GPS UNIT


FLASH ROM
IC502
PD6362B
IC503
M5M5V216ATP-70HI
DRAGON
IC501
PD3390A
CPU
32.768kHz
X501
CSS1319
L501
C502
C503
C504
C505
C507
C508
C509
C511
C516
C517
C518
R502 47K
R508 10K
R513 10K
L531
L504
L503
R533 10K
R534 10K
R535 10K
R536 0R0
R482 22K
R483 47K
C471 100P
L467
L468
R478 2R2K
R477 2R2K
R479 2R2K
R480 3R3K
R481 3R3K
GNDDR
CERAM
CEROM
OE
WE
LBS
HBS
RTC
PLI
RESETB
TXDO
RXDO
GPSTOC
CTOGPS
POUT
DINT
DDO
BCLOCK
DSTB
CSB
SCLK
ADI
ADO
EOC
CCLK

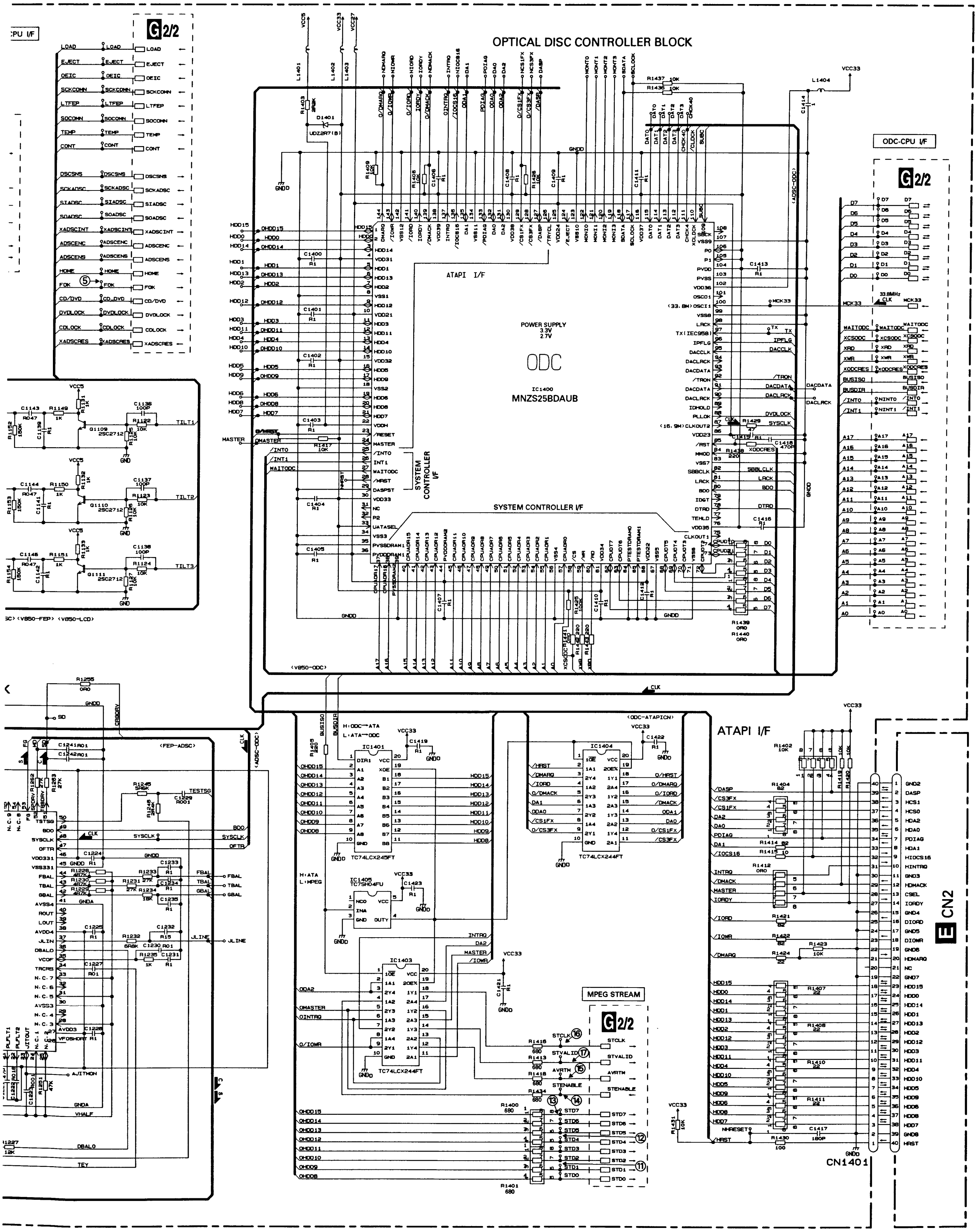
3.18 DVD MECHANISM MODULE(1/2)(GUIDE PAGE)

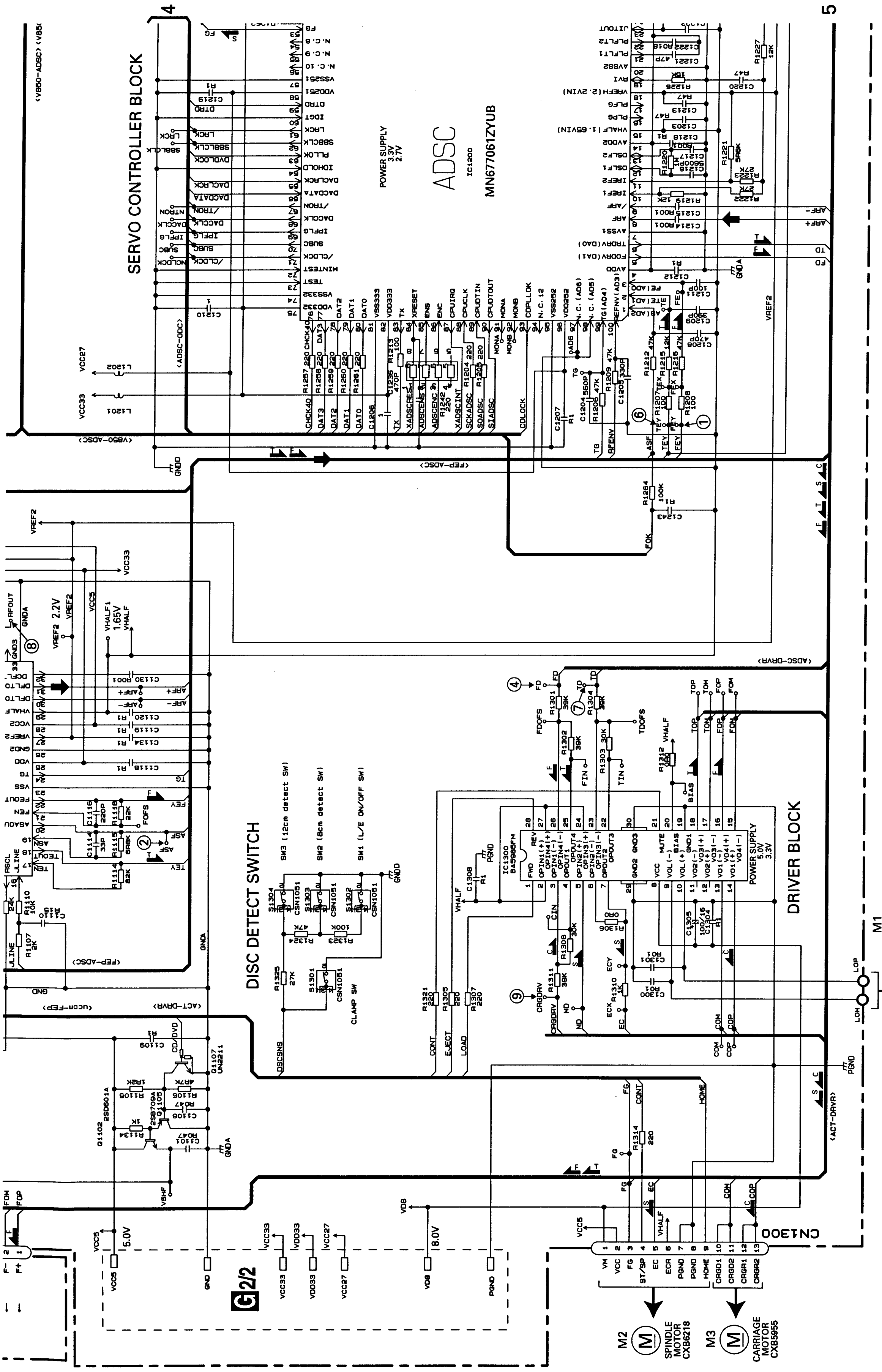
G-a 1/2

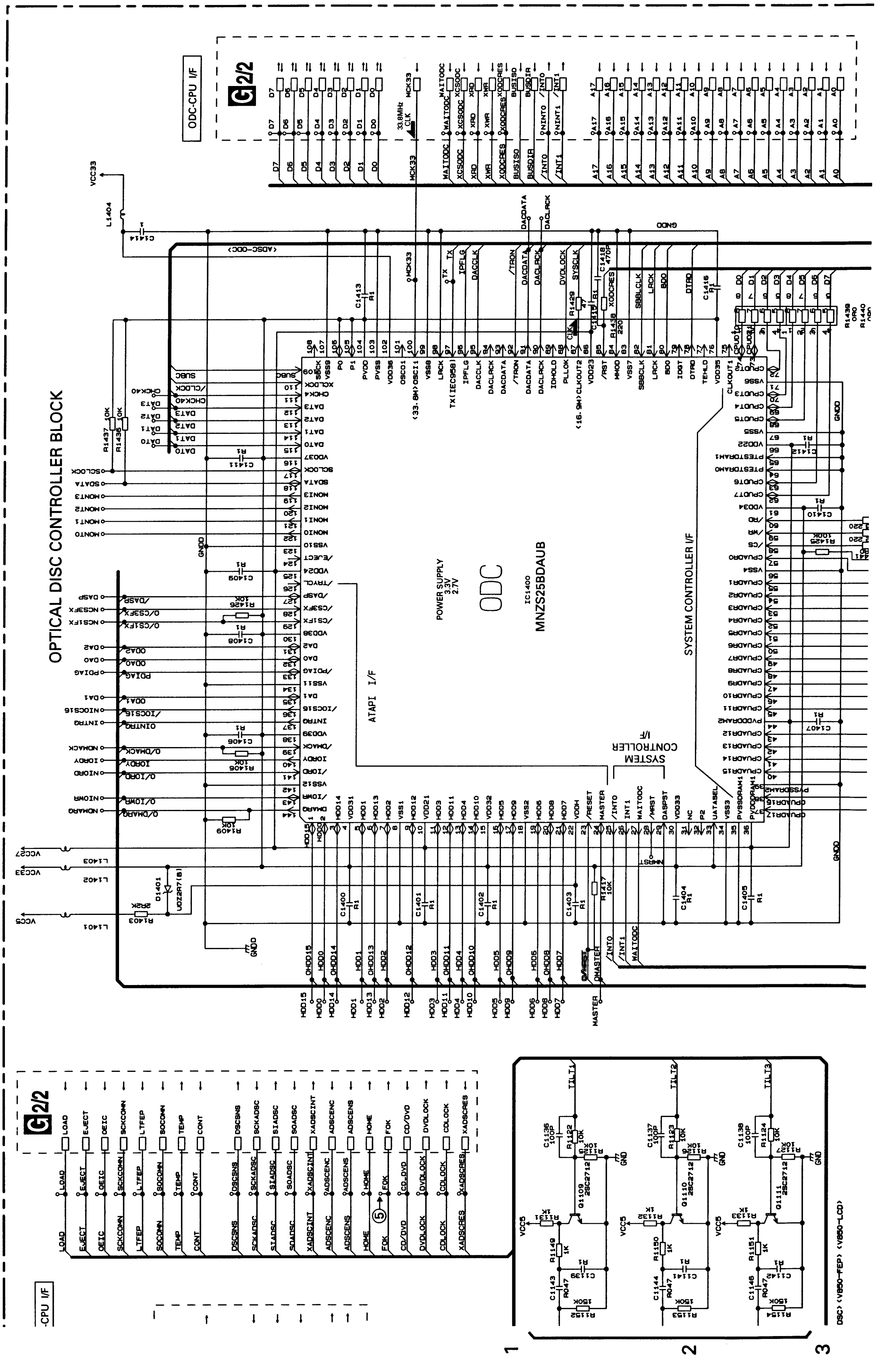

G1/2 DVD CORE UNIT V(FRONT END)
RF SIGNAL
F FOCUS SERVO LINE
T TRACKING SERVO LINE
C CARRIAGE SERVO LINE
S SPINDLE SERVO LINE
CLK CLOCK LINE
PICKUP UNIT(SERVICE)(DP4)
CN1100
RF AMP BLOCK
FEP
IC1100
AN8702FH
POWER SUPPLY 5.0V 3.3V
IC1101 NJM2904M (2/2)
IC1101 NJM2904M (1/2)
G2/2
SERVO CONTROLLER BLOCK
ADSC
IC1200
MN677061ZYUB
POWER SUPPLY 3.3V 2.7V
DISC DETECT SWITCH
SW3 (12cm detect SW)
SW2 (8cm detect SW)
SW1 (L/E ON/OFF SW)
CLAMP SW
DRIVER BLOCK
IC1300
BA5985FM
POWER SUPPLY 5.0V 3.3V
M2 SPINDLE MOTOR CXB6218
M3 CARRIAGE MOTOR CXB5955
M1 LOADING MOTOR CXB5960
CN1300
Q1104 2SB1260
Q1106 2SB1260
Q1102 2SD601A
Q1105 2SB709A
Q1107 UN2211
5.0V
8.0V
2.2V
1.65V

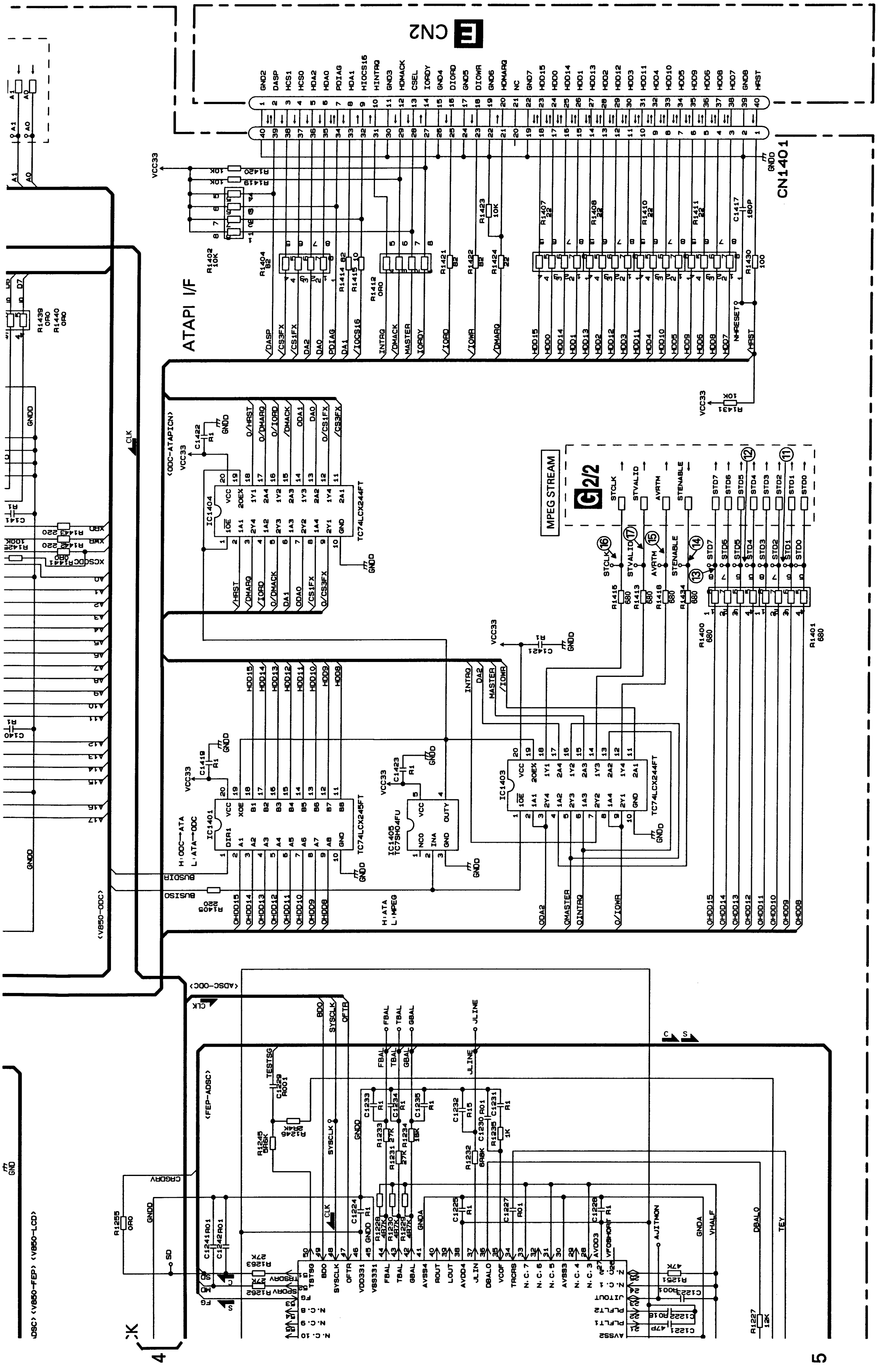

G1/2 DVD CORE UNIT V(FRONT END)
RF AMP BLOCK
RF SIGNAL
F FOCUS SERVO LINE
T TRACKING SERVO LINE
C CARRIAGE SERVO LINE
S SPINDLE SERVO LINE
CLK CLOCK LINE
SERVO-CPU I/F
G2/2
X2ENV
TILT1
TILT2
TILT3
FG
OFTR
IC1101 NJM2904M (2/2)
IC1101 NJM2904M (1/2)
IC1100 AN8702FH
FEP
POWER SUPPLY 5.0V 3.3V
VHALF
VREF1 2.2V
1.65V VHALF2
GNDA
VCC5
RFENV
BDO
CH1
CH2
CH3
LCOM
RF-
RF+
CN1100
PICKUP UNIT(SERVICE)(DP4)
65LD
LDGND
78LD
VSHF
TEMP
Vref
GND
Vcc
SW
A
B1
B2
RF-
B3
RF+
B4
C
65MOG
65MO
78MOG
78MO
MOC
LCD SG3
LCD SG2
LCD SG1
LCD COM
T+
T-
F-
F+
Q1104 2SB1260
Q1108 2SB1260
D1100 1SS355
D1101 1SS355
1
2
3
⑩
③
⑧

G-b 1/2


OPTICAL DISC CONTROLLER BLOCK
CPU I/F
G 2/2
ODC-CPU I/F
G 2/2
POWER SUPPLY
3.3V
2.7V
ODC
IC1400
MNZS25BDAUB
ATAPI I/F
SYSTEM CONTROLLER I/F
SYSTEM CONTROLLER I/F
ATAPI I/F
MPEG STREAM
G 2/2
IC1401
TC74LCX245FT
IC1404
TC74LCX244FT
IC1403
TC74LCX244FT
IC1405
TC7SH04FU
CN1401
E CN2
VCC5
VCC33
VCC27
L1401
L1402
L1403
L1404
Q1109
2SC2712
Q1110
2SC2712
Q1111
2SC2712
TILT1
TILT2
TILT3
H:ODC→ATA
L:ATA→ODC
H:ATA
L:MPEG
STCLK
STVALID
AVRTM
STENABLE
STD7
STD6
STD5
STD4
STD3
STD2
STD1
STD0
GNDD
CLK
(V850-ODC)
(FEP-ADSC)
(ODC-ATAPICN)
(ADSC-ODC)


SERVO CONTROLLER BLOCK
ADSC
IC1200
MN677061ZYUB
POWER SUPPLY 3.3V 2.7V
DISC DETECT SWITCH
SW3 (12cm detect SW)
SW2 (8cm detect SW)
SW1 (L/E ON/OFF SW)
CLAMP SW
DRIVER BLOCK
IC1300
BA5985FM
POWER SUPPLY 5.0V 3.3V
M1 LOADING MOTOR CXB5960
CN1300
M2 SPINDLE MOTOR CXB6218
M3 CARRIAGE MOTOR CXB5955
G 2/2
VCC5 5.0V
VD8 8.0V
4
5
A
B
C
D

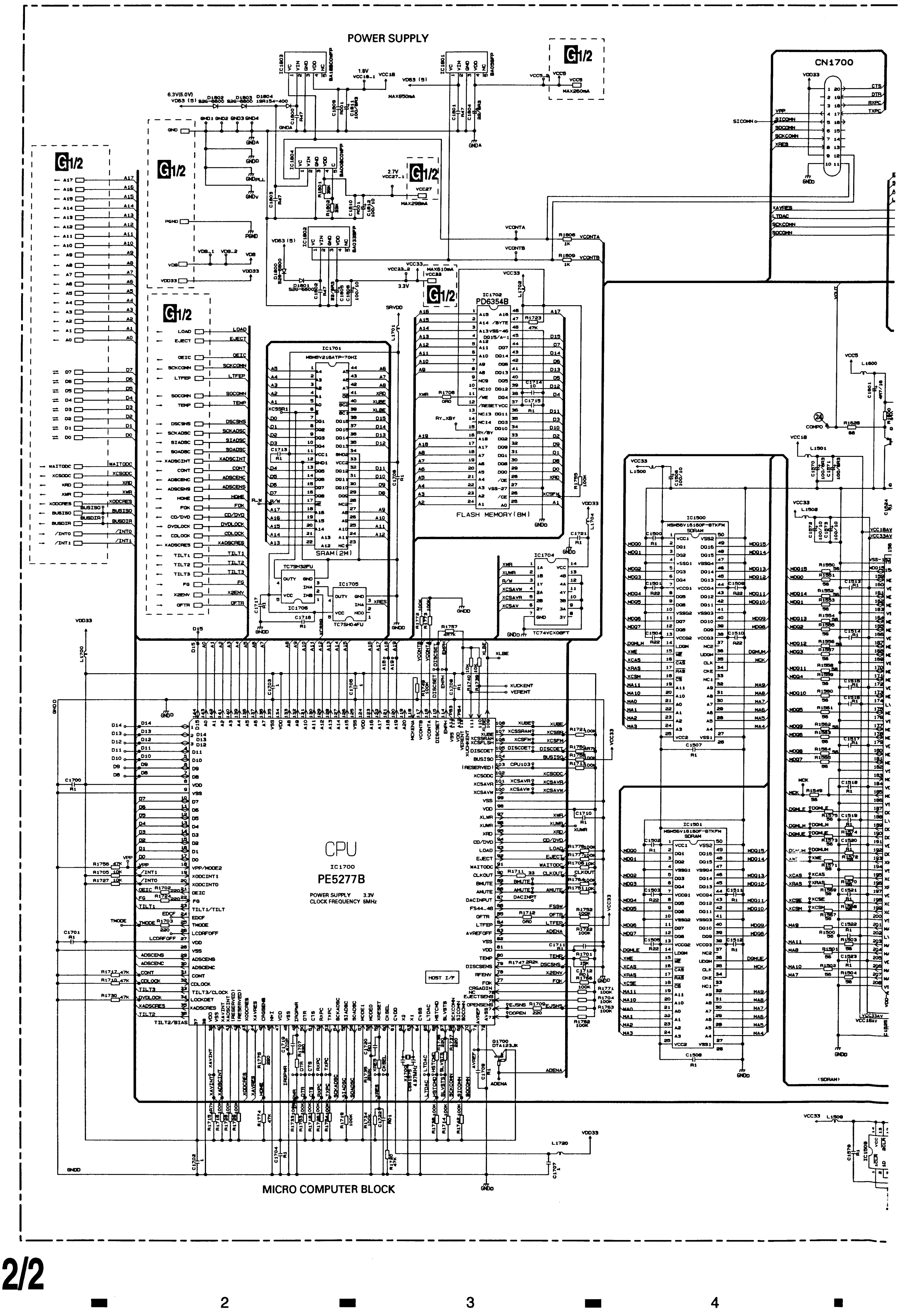

OPTICAL DISC CONTROLLER BLOCK
ODC-CPU I/F
G2/2
ODC
IC1400
MNZS25BDAUB
POWER SUPPLY
3.3V
2.7V
ATAPI I/F
SYSTEM CONTROLLER I/F
SYSTEM CONTROLLER I/F
VCC33
VCC27
VCC5
GNDD
33.8MHz CLK
Q1109 2SC2712
Q1110 2SC2712
Q1111 2SC2712
TILT1
TILT2
TILT3
DSC>(VBSO-FEP)(VBSO-LCD)
-CPU I/F
1
2
3


E CN2
CN1401
ATAPI I/F
IC1404
TC74LCX244FT
IC1401
TC74LCX245FT
IC1405
TC7SH04FU
IC1403
TC74LCX244FT
MPEG STREAM
G 2/2
STCLK
STVALID
AVRTM
STENABLE
STD7
STD6
STD5
STD4
STD3
STD2
STD1
STD0
VCC33
GNDD
HRST
BUSDIR
BUSISO
(ODC-ATAPICN)
(V850-ODC)
(ADSC-ODC)
(FEP-ADSC)
CLK
FBAL
TBAL
GBAL
JLINE
BDO
SYSCLK
OFTR
CRGDRV
TESTSG
SD
FG
AJITMON
VHALF
DBALO
TEY
H:ODC→ATA
L:ATA→ODC
H:ATA
L:MPEG

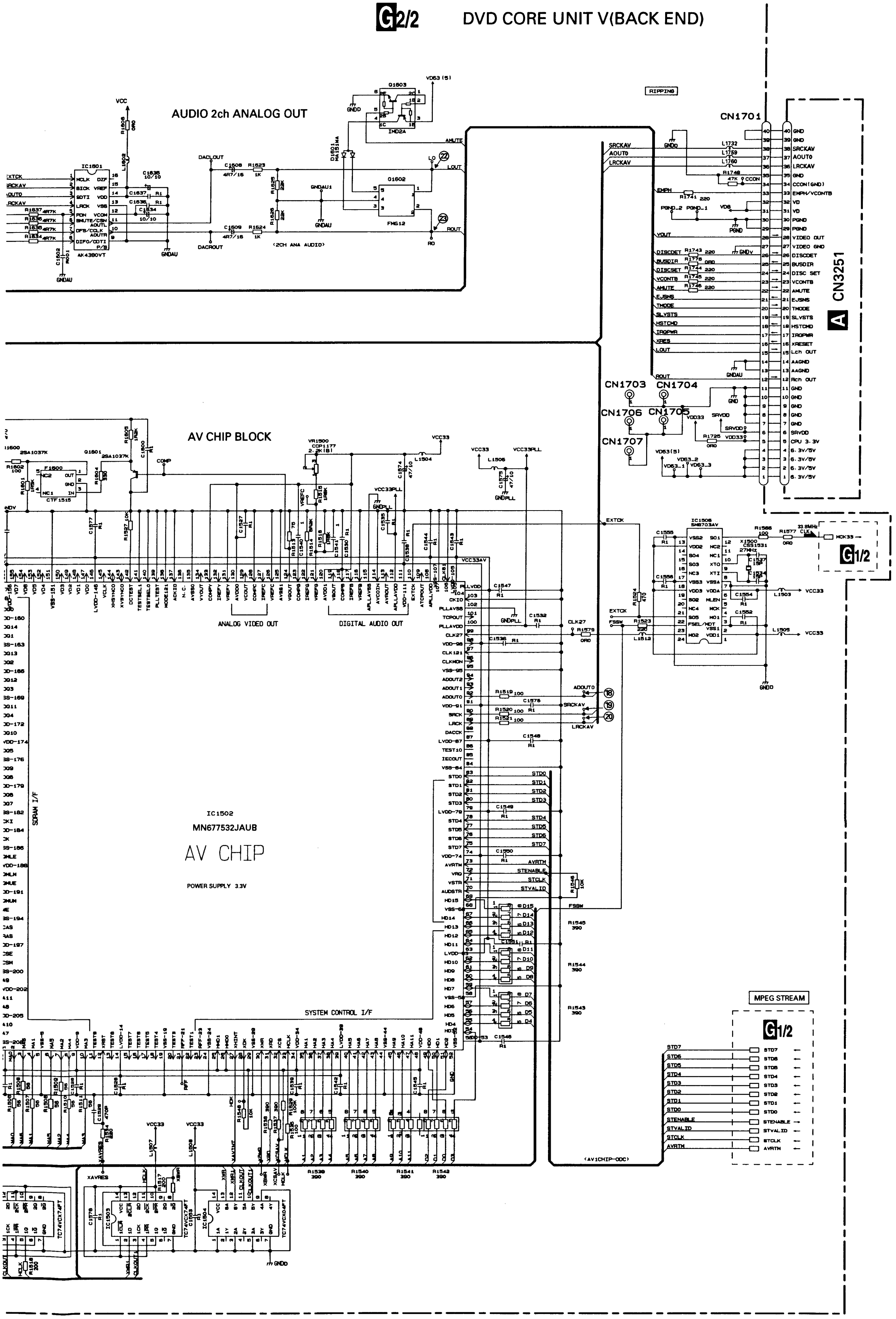
G-a
G-b
A
B
C
D

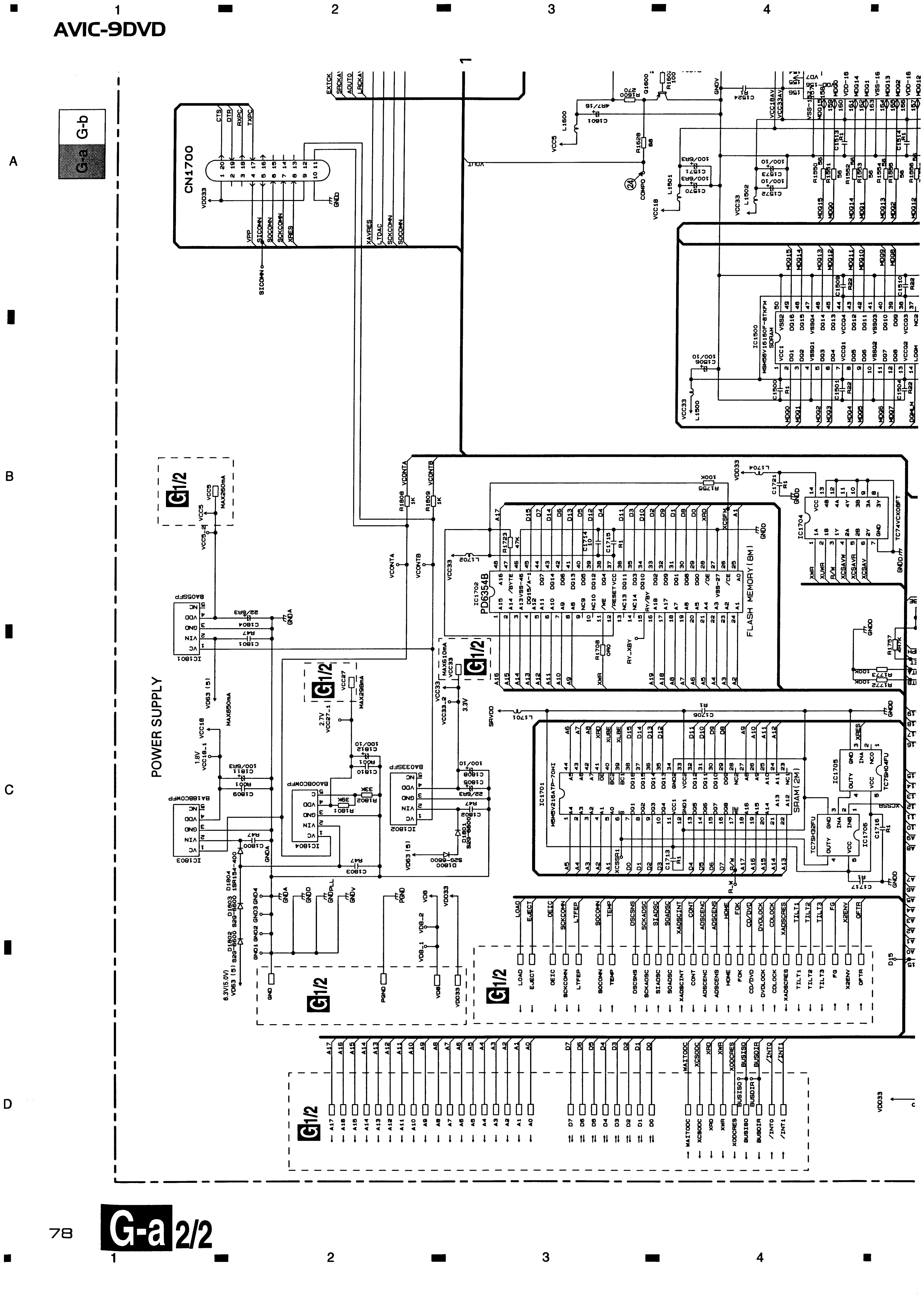
3.19 DVD MECHANISM MODULE(2/2)(GUIDE PAGE)

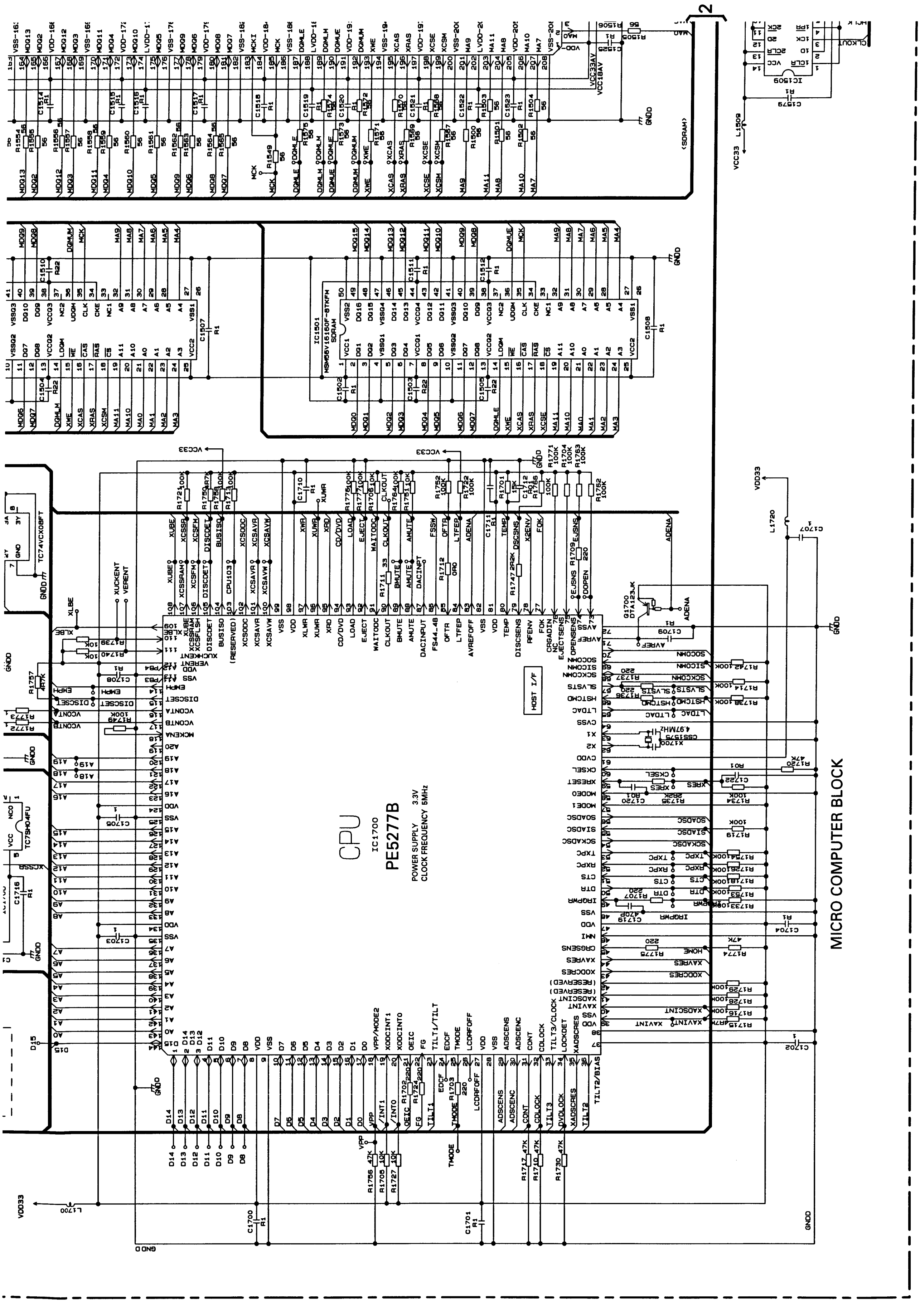
G-a 2/2

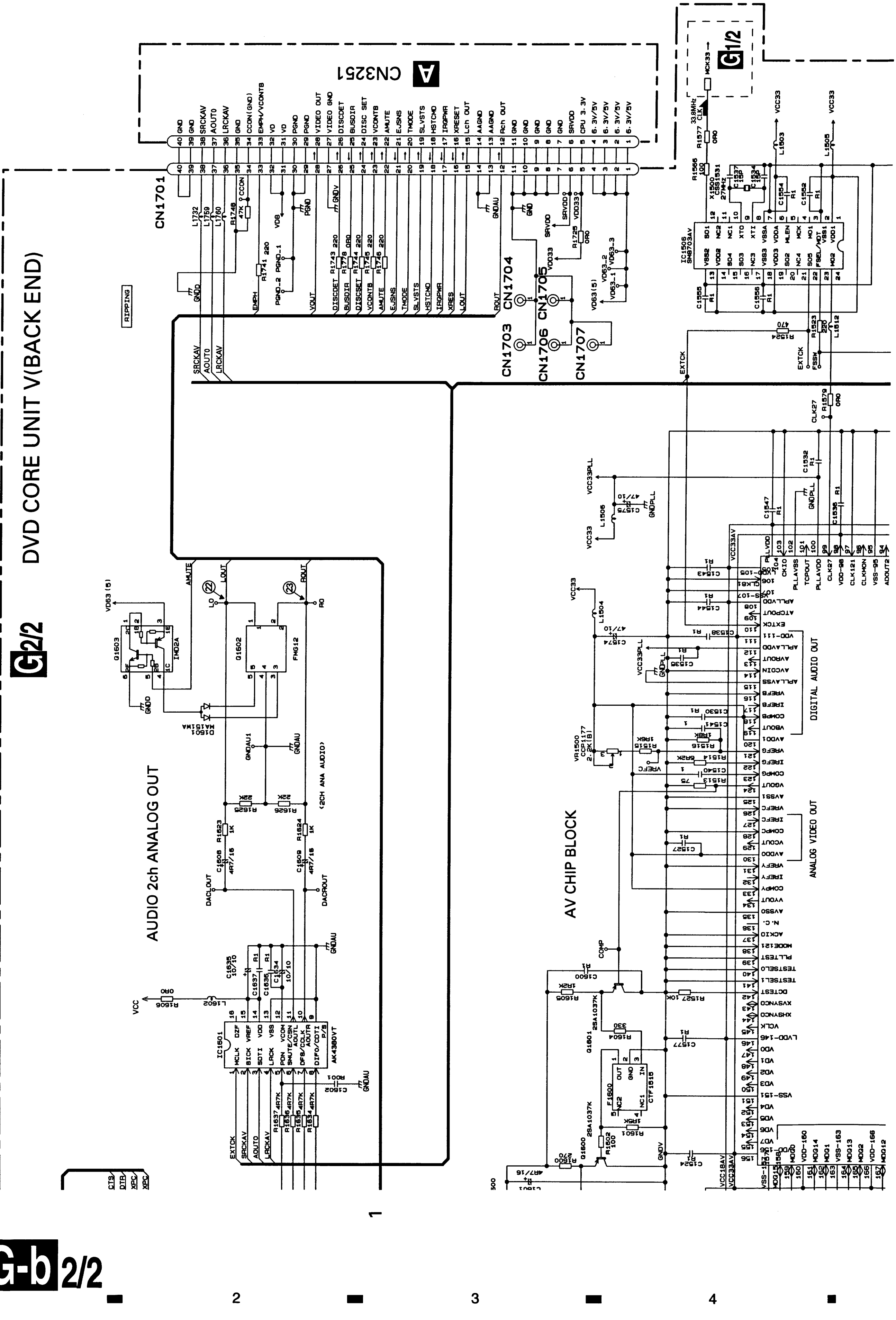

A
B
C
D
POWER SUPPLY
CN1700
G1/2
IC1803
IC1801
IC1804
IC1802
IC1702
PD6354B
FLASH MEMORY(8M)
IC1701
SRAM(2M)
TC7SH32FU
IC1705
TC7SH04FU
IC1704
TC74VCX08FT
CPU
IC1700
PE5277B
POWER SUPPLY 3.3V
CLOCK FREQUENCY 6MHz
HOST I/F
IC1500
IC1501
MICRO COMPUTER BLOCK

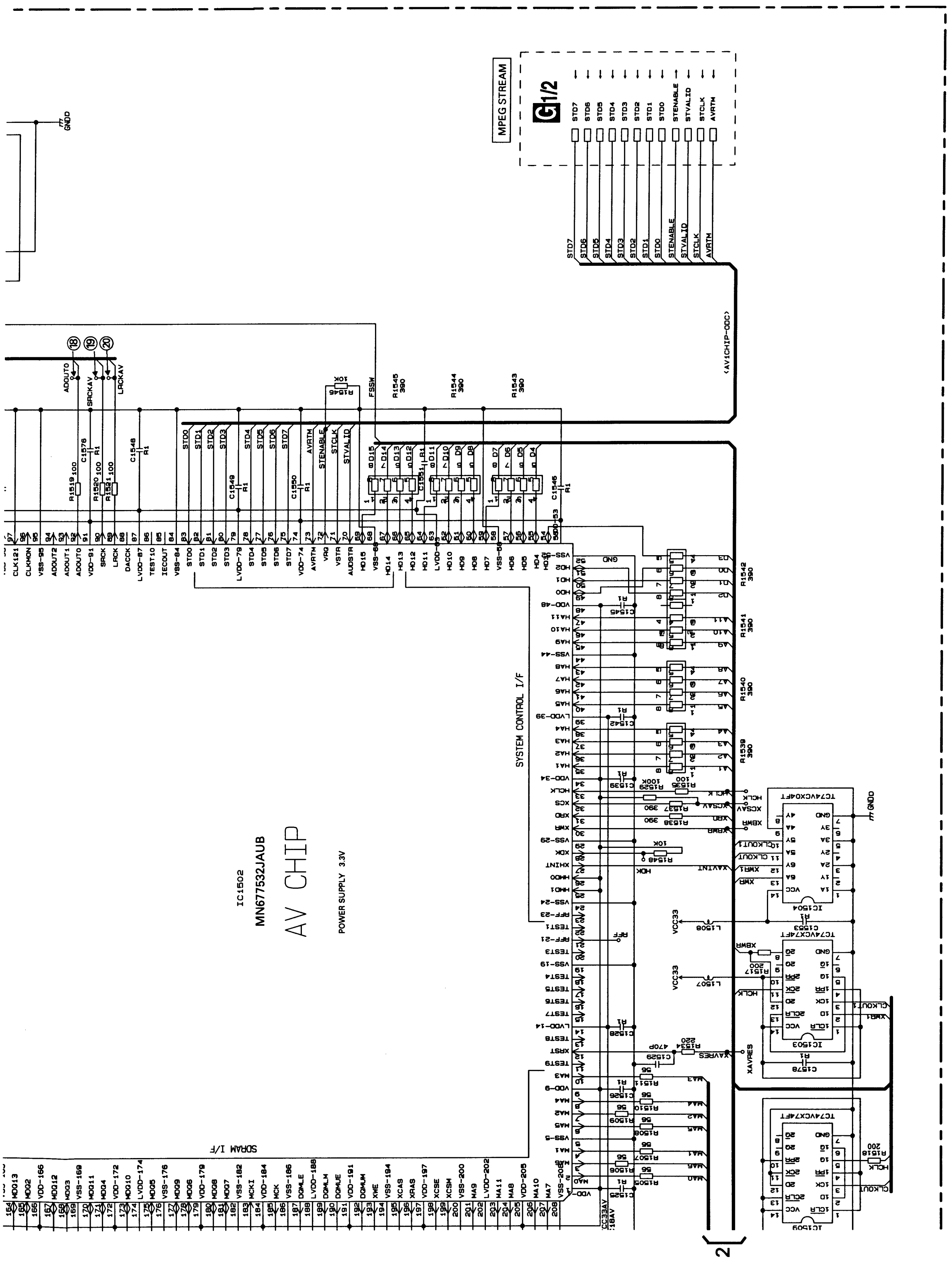
G-b 2/2


G 2/2
DVD CORE UNIT V(BACK END)
AUDIO 2ch ANALOG OUT
AV CHIP BLOCK
IC1502
MN677532JAUB
AV CHIP
POWER SUPPLY 3.3V
SDRAM I/F
SYSTEM CONTROL I/F
ANALOG VIDEO OUT
DIGITAL AUDIO OUT
CN1701
CN3251
A
CN1703
CN1704
CN1705
CN1706
CN1707
IC1601
AK4380VT
IC1506
SM8703AV
MPEG STREAM
G 1/2
RIPPING
(2CH ANA AUDIO)
(AV1CHIP-ODC)


1
2
3
4
A
B
C
D
G-a
G-b
POWER SUPPLY
CN1700
VDD33
VPP
SICOMN
SOCOMN
SCKCOMN
XRES
CTS
DTR
RXPC
TXPC
GNDD
EXTCK
SRCKAV
ADUTO
LRCKAV
XAVRES
LTDAC
SCKCOMN
SOCOMN
VOUT
COMPO
VCC5
VCC18
VCC33
L1500
L1501
L1502
IC1500
MSM56V16160F-8TKFM
SDRAM
IC1702
PD6354B
FLASH MEMORY(8M)
IC1701
M5M5V216ATP-70HI
SRAM(2M)
IC1704
TC74VCX08FT
IC1705
TC7SH04FU
IC1706
TC7SH32FU
IC1801
BA05SFP
IC1802
BA033SFP
IC1803
BA18BC0WFP
IC1804
BA00BC0WFP
VCONTA
VCONTB
VCC5
MAX260mA
VD63 (5)
MAX650mA
VCC27
MAX298mA
VCC33
MAX510mA
1.8V
2.7V
3.3V
6.3V(5.0V)
SRVDD
GNDA
GNDD
GNDPLL
GNDV
PGND
VD8
VDD33
G1/2
LOAD
EJECT
OEIC
SCKCOMN
LTFEP
SOCOMN
TEMP
DSCSNS
SCKADSC
SIADSC
SOADSC
XADSCINT
CONT
ADSCENC
ADSCENS
HOME
FOK
CD/DVD
DVDLOCK
CDLOCK
XADSCRES
TILT1
TILT2
TILT3
FG
X2ENV
OFTR
A17
A16
A15
A14
A13
A12
A11
A10
A9
A8
A7
A6
A5
A4
A3
A2
A1
A0
D7
D6
D5
D4
D3
D2
D1
D0
WAITODC
XCSODC
XRD
XWR
XODCRES
BUSISO
BUSDIR
/INT0
/INT1


CPU
IC1700
PE5277B
POWER SUPPLY 3.3V
CLOCK FREQUENCY 6MHz
MICRO COMPUTER BLOCK
HOST I/F
IC1501
MSM56V16160F-8TKFN
SDRAM
(SDRAM)
TC74VCX08FT
TC7SH04FU
VCC33
VDD33
GNDD
G-b
G-a

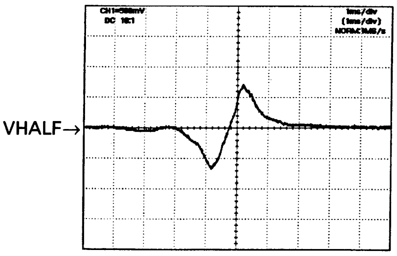

G-a
G-b
A CN3251
G1/2
G2/2
DVD CORE UNIT V(BACK END)
CN1701
CN1703
CN1704
CN1705
CN1706
CN1707
AUDIO 2ch ANALOG OUT
AV CHIP BLOCK
DIGITAL AUDIO OUT
ANALOG VIDEO OUT
(2CH ANA AUDIO)
RIPPING
IC1601 AK4380VT
IC1505 SM8703AV
X1500 CSS1531 27MHz
Q1601 2SA1037K
Q1602 FMG12
Q1603 IMD2A
D1601 MA151WA
F1600 CTF1515
VR1500 CCP1177 2.2K(B)
L1503
L1504
L1505
L1506
L1602
L1612
MCK33
33.8MHz CLK
40 GND
39 GND
38 SRCKAV
37 AOUT0
36 LRCKAV
35 GND
34 CCON(GND)
33 EMPH/VCONTB
32 VD
31 VD
30 PGND
29 PGND
28 VIDEO OUT
27 VIDEO GND
26 DISCDET
25 BUSDIR
24 DISC SET
23 VCONTB
22 AMUTE
21 EJSNS
20 TMODE
19 SLVSTS
18 HSTCMD
17 IRQPWR
16 XRESET
15 Lch OUT
14 AAGND
13 AAGND
12 Rch OUT
11 GND
10 GND
9 GND
8 GND
7 GND
6 SRVDD
5 CPU 3.3V
4 6.3V/5V
3 6.3V/5V
2 6.3V/5V
1 6.3V/5V
SRCKAV
AOUT0
LRCKAV
EXTCK
AMUTE
LOUT
ROUT
DACLOUT
DACROUT
VCC
VCC33
VCC33PLL
VCC33AV
VCC18AV
GNDAU
GNDV
GNDD
VD63(5)
CTS
DTR
XPC
XPC


MPEG STREAM
G 1/2
STD7
STD6
STD5
STD4
STD3
STD2
STD1
STD0
STENABLE
STVALID
STCLK
AVRTM
(AV1CHIP-ODC)
GNDD
ADOUT0
SRCKAV
LRCKAV
FSSW
R1545 390
R1544 390
R1543 390
R1546 10K
C1546
C1548
C1549
C1550
C1551
R1519 100
R1520 100
R1521 100
C1576
IC1502
MN67532JAUB
AV CHIP
POWER SUPPLY 3.3V
SYSTEM CONTROL I/F
SDRAM I/F
R1542 390
R1541 390
R1540 390
R1539 390
TC74VCX04FT
IC1504
TC74VCX74FT
IC1503
IC1509
C1553
C1578
L1508
L1507
VCC33
XBWR
XAVRES
CLKOUT
XWR
HCLK
R1518 200
R1547 200
R1534 220
C1529 470P
R1535 100
R1529 100K
R1537 390
R1538 390
R1548 10K
R1511 56
R1510 56
R1509 56
R1508 56
R1507 56
R1506 56
R1505 56
C1526
C1528
C1525
C1539
C1542
C1545
VCC33AV
V18AV
2

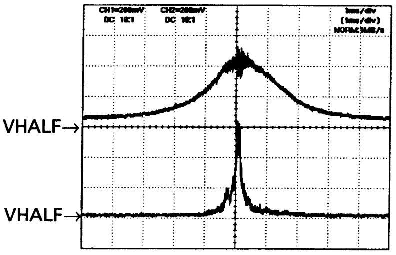
● Waveforms

Note:1. The encircled number denote measuring pointes in the circuit diagram.
2. Reference voltage VHALF : 1.65V

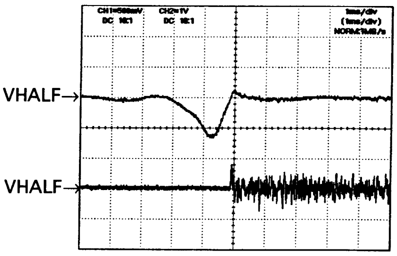
① FEY 500mV/div. 1ms/div.
Focus search



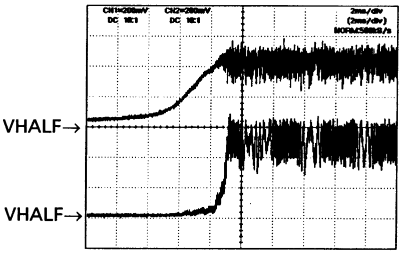
② CH1: ASF
③ CH2: RFENV 200ms/div. 1ms/div.
Focus search



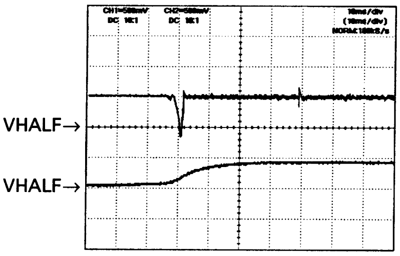
① CH1: FEY 500mV/div. 1ms/div.
④ CH2: FD 1V/div. 1ms/div.
Focus close



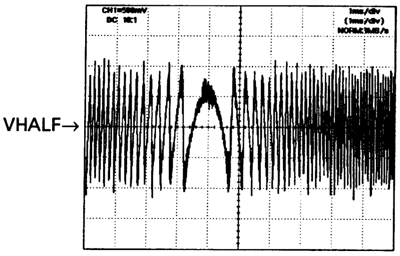
② CH1: ASF
③ CH1: RFENV 200mV/div. 2ms/div.
Focus close



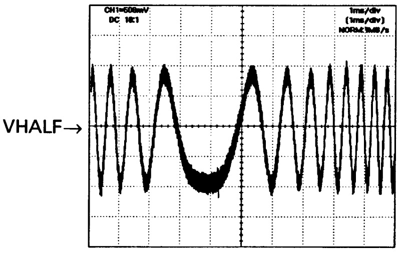
① CH1: FEY
⑤ CH2: FOK 500mV/div. 10ms/div.
Focus close



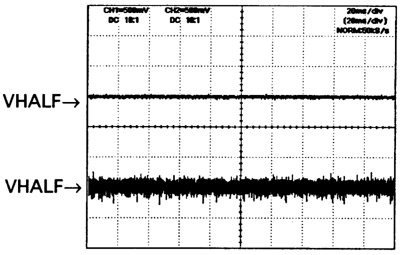
⑥ CH1: TEY 500mV/div. 1ms/div.
Focus close(DVD)



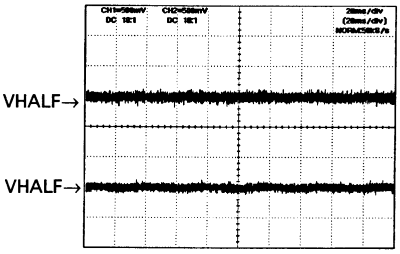
⑥ CH1: TEY 500mV/div. 1ms/div.
Focus close(CD)



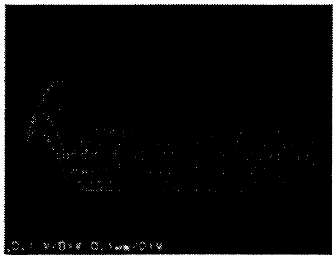
① CH1: FEY
④ CH2: FD 500mV/div.20ms/div.
Play



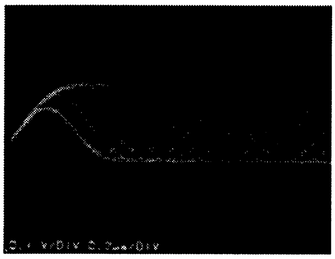
⑥ CH1: TEY
⑦ CH2: TD 500mV/div.20ms/div.
Play



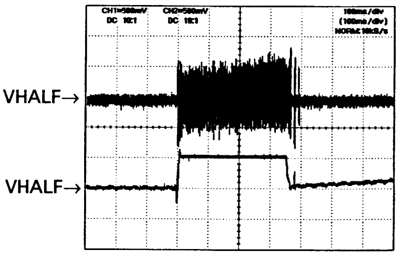
⑧ CH1: RFOUT 0.1V/div. 0.1μs/div.
Play(DVD surroundings on inside)



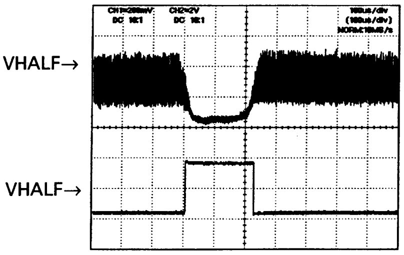
⑧ CH1: RFOUT 0.1V/div. 0.2μs/div.
Play(CD)



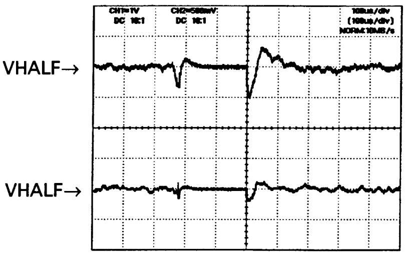
⑥ CH1: TEY 500mV/div. 100ms/div.
⑨ CH2: CRGDRV
Surroundings on inside->
surroundings on outside



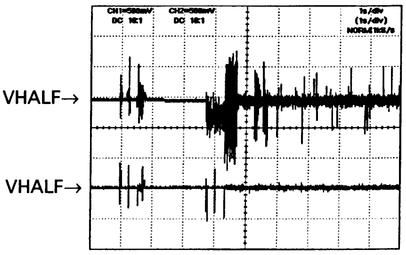
⑧ CH1: RFOUT 200mV/div. 100μs/div.
⑩ CH2: BDO 2V/div. 100μs/div.
Black dot



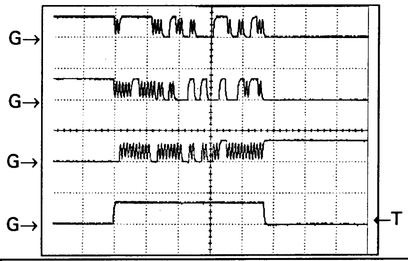
④ CH1: FD 1V/div. 100μs/div.
⑦ CH2: TD 500mV/div. 100μs/div.
Black dot



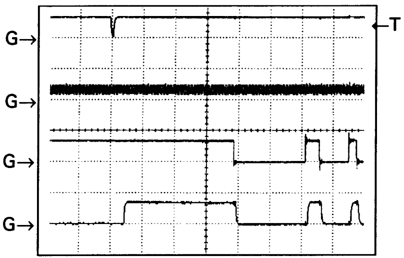
⑥ CH1: TEY 500mV/div. 1s/div.
① CH2: FEY
EDC1 mode set up(DVD)



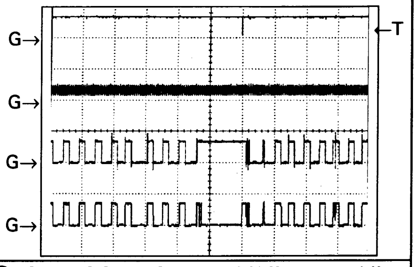
⑪ CH1: STD1
⑫ CH2: STD4 5V/div. 2μs/div.
⑬ CH3: STD7
⑭ CH4: STENABLE



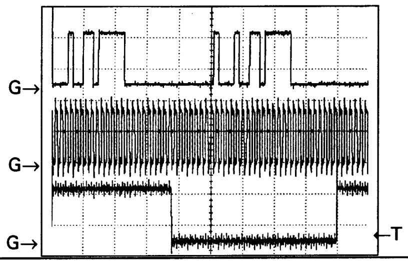
⑮ CH1: AVRTM
⑯ CH2: STCLK 5V/div. 2μs/div.
⑰ CH3: STVALID
⑭ CH4: STENABLE



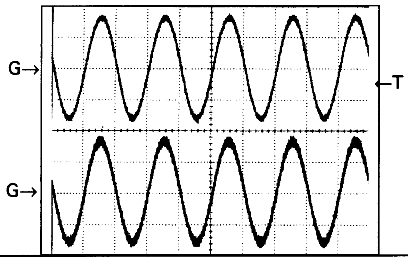
⑮ CH1: AVRTM
⑯ CH2: STCLK 5V/div. 50μs/div.
⑰ CH3: STVALID
⑭ CH4: STENABLE



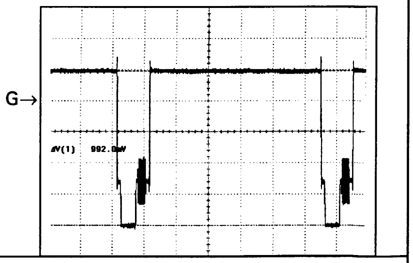
⑱ CH1: AOUT0
⑲ CH2: SRCKAV 2V/div. 2μs/div.
⑳ CH3: LRCKAV



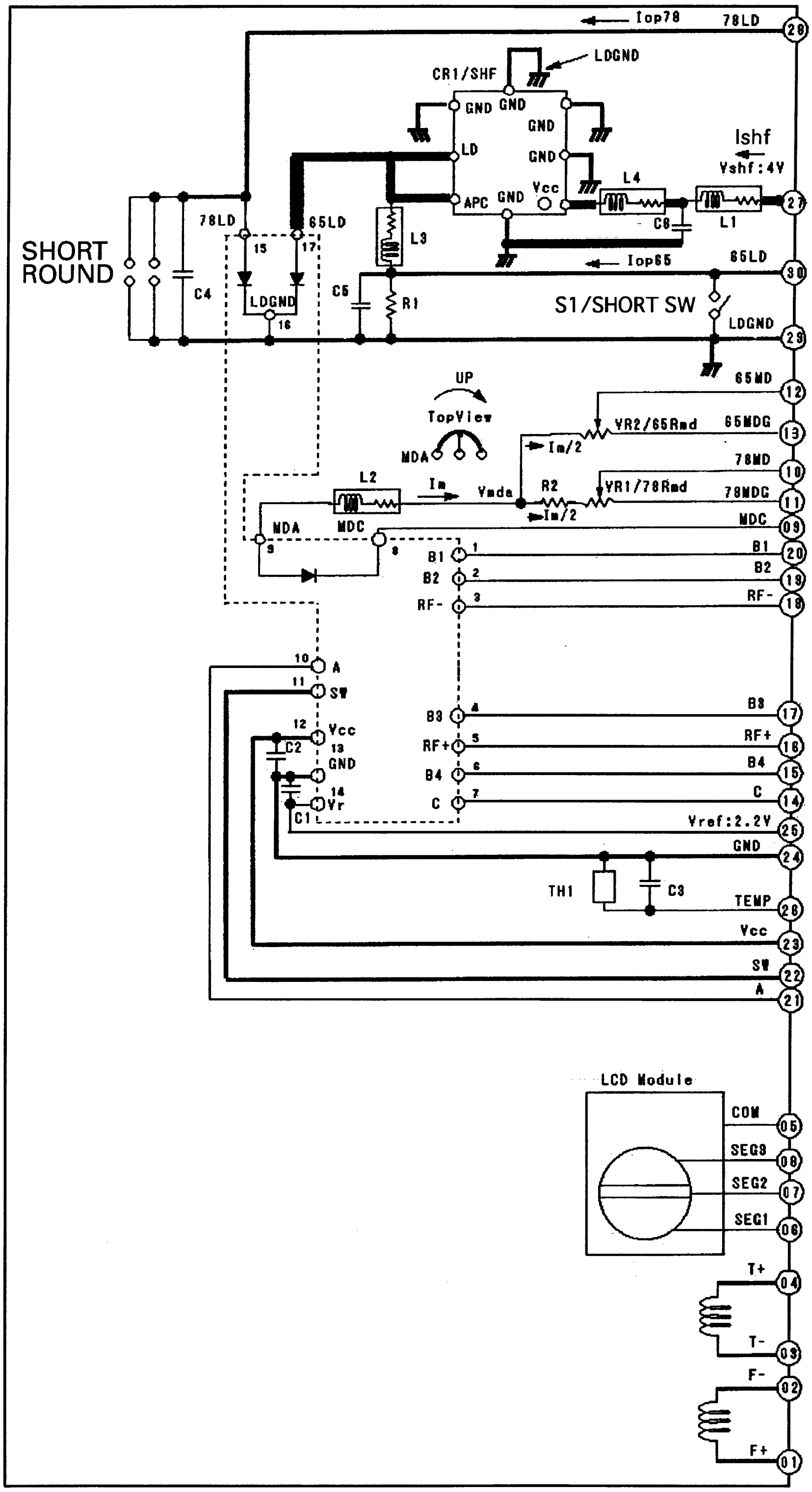
㉒ CH1: LO 1V/div. 500μs/div.
㉓ CH2: RO



㉔ CH1: COMPO 200mV/div. 10μs/div.
[White 100% output]



3.20 PU UNIT(REFERENCE)

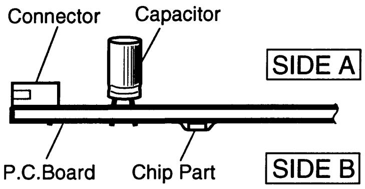

Iop78
78LD
28
CR1/SHF
LDGND
GND
GND
GND
GND
LD
APC
GND
Vcc
L4
Ishf
Vshf:4V
27
C8
L1
78LD
65LD
15
17
L3
SHORT
ROUND
C4
LDGND
16
C5
R1
Iop65
65LD
30
S1/SHORT SW
LDGND
29
65MD
12
UP
TopView
MDA
VR2/65Rmd
65MDG
13
Im/2
78MD
10
L2
Im
Vmda
R2
VR1/78Rmd
78MDG
11
Im/2
MDA
MDC
MDC
09
9
8
B1
1
B1
20
B2
2
B2
19
RF-
3
RF-
18
10
A
11
SW
12
Vcc
C2
13
GND
14
Vr
C1
B3
4
B3
17
RF+
5
RF+
16
B4
6
B4
15
C
7
C
14
Vref:2.2V
25
GND
24
TH1
C3
TEMP
26
Vcc
23
SW
22
A
21
LCD Module
COM
05
SEG3
08
SEG2
07
SEG1
06
T+
04
T-
03
F-
02
F+
01

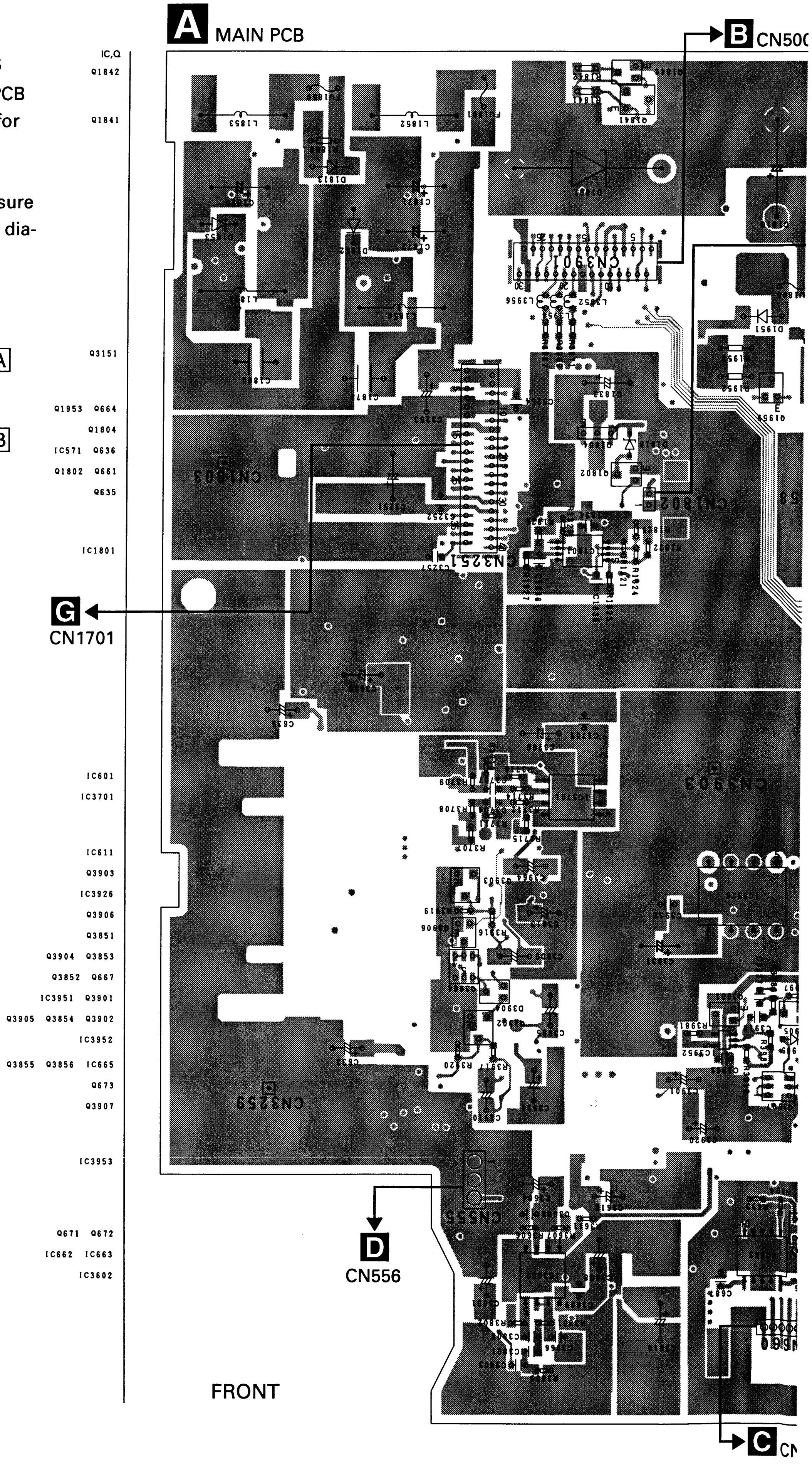
4. PCB CONNECTION DIAGRAM

4.1 MAIN PCB

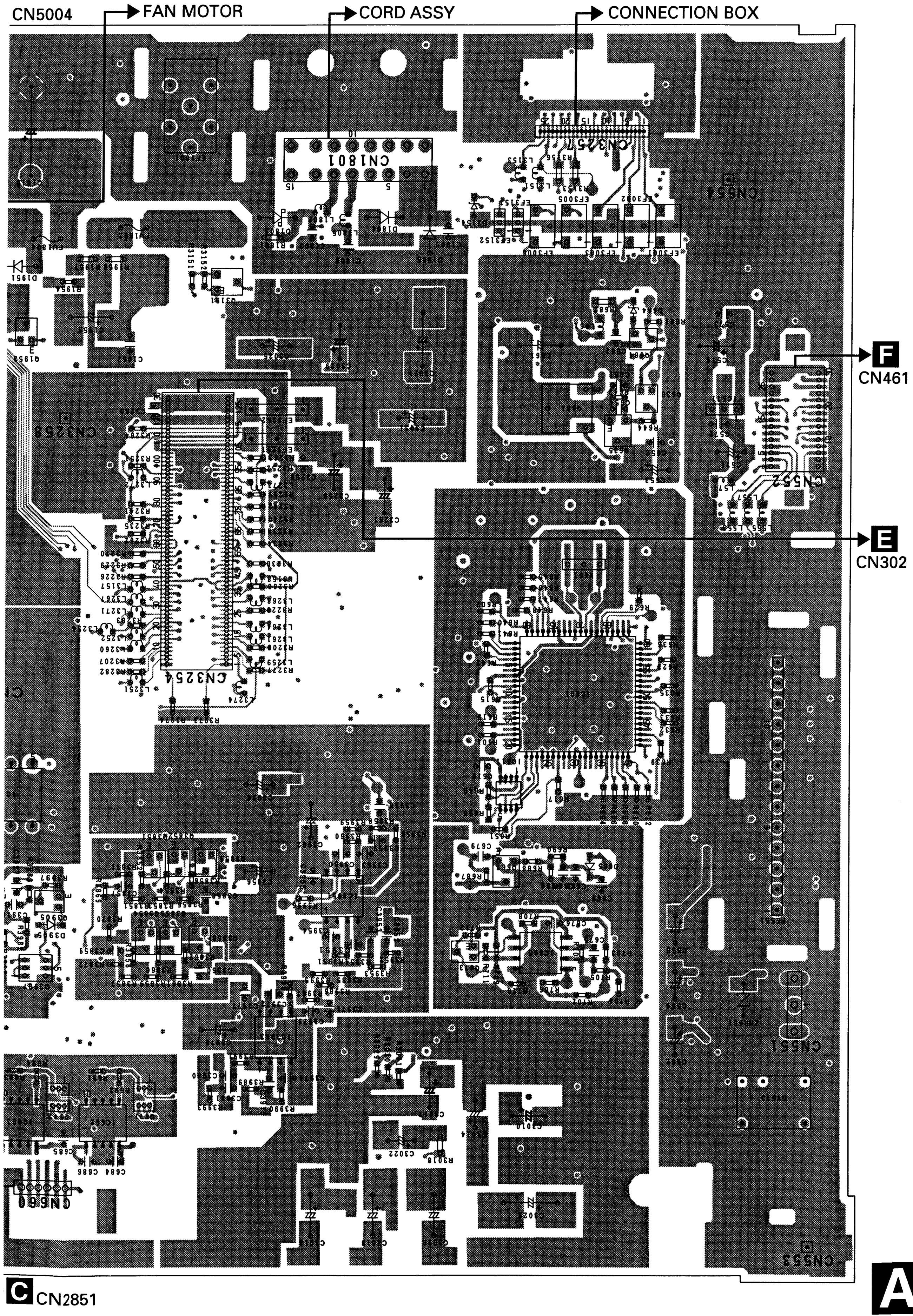
NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams


Connector
Capacitor
SIDE A
P.C.Board
Chip Part
SIDE B

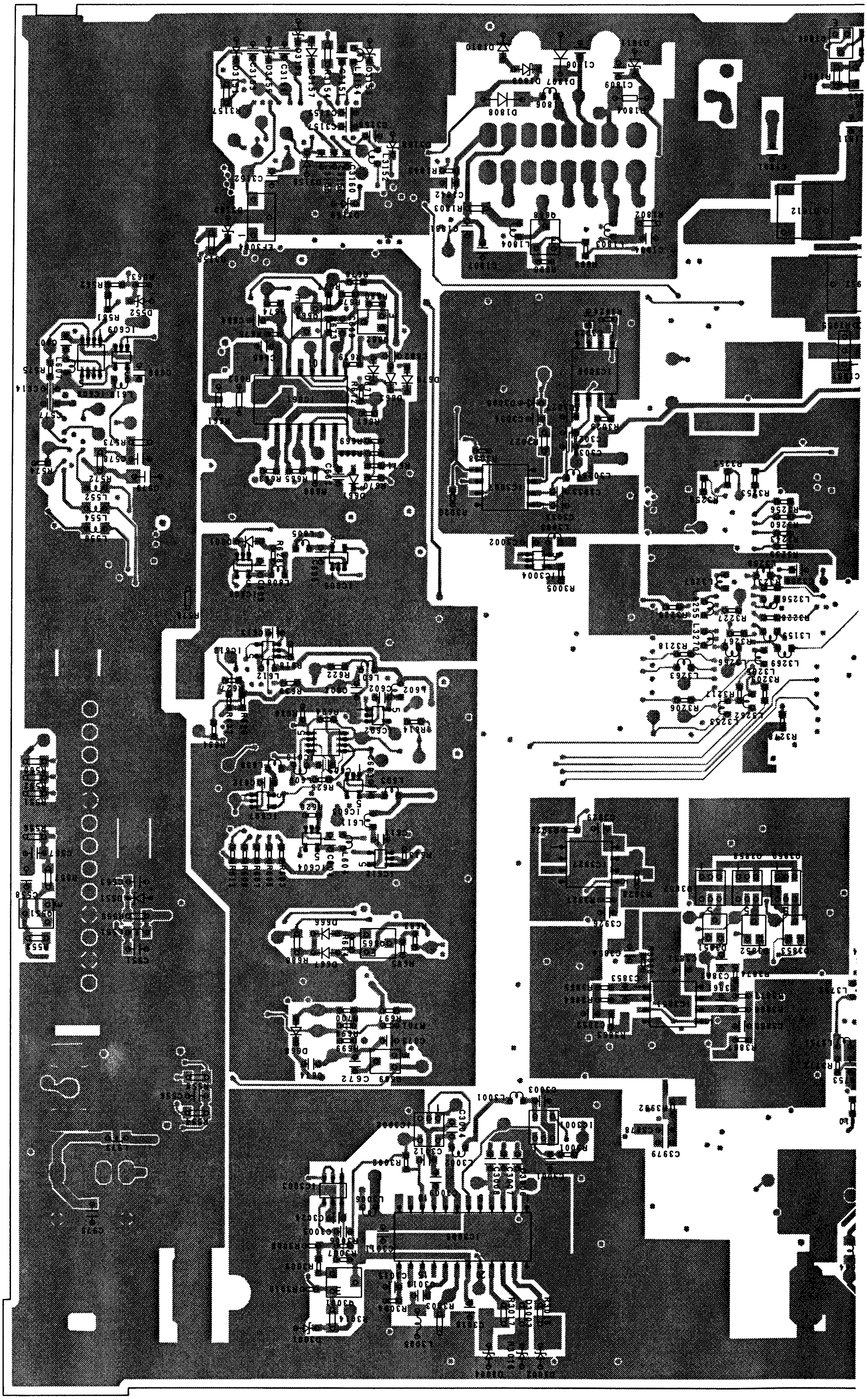

A MAIN PCB
B CN500
IC,Q
Q1842
Q1841
Q3151
Q1953 Q664
Q1804
IC571 Q636
Q1802 Q661
Q635
IC1801
G CN1701
IC601
IC3701
IC611
Q3903
IC3926
Q3906
Q3851
Q3904 Q3853
Q3852 Q667
IC3951 Q3901
Q3905 Q3854 Q3902
IC3952
Q3855 Q3856 IC665
Q673
Q3907
IC3953
Q671 Q672
IC662 IC663
IC3602
D CN556
FRONT
C CN
CN3901
CN3251
CN1803
CN1802
CN3903
CN3259
CN555
D1813
D1951
R3707
R3708
R3709
R3981
C3952

SIDE A

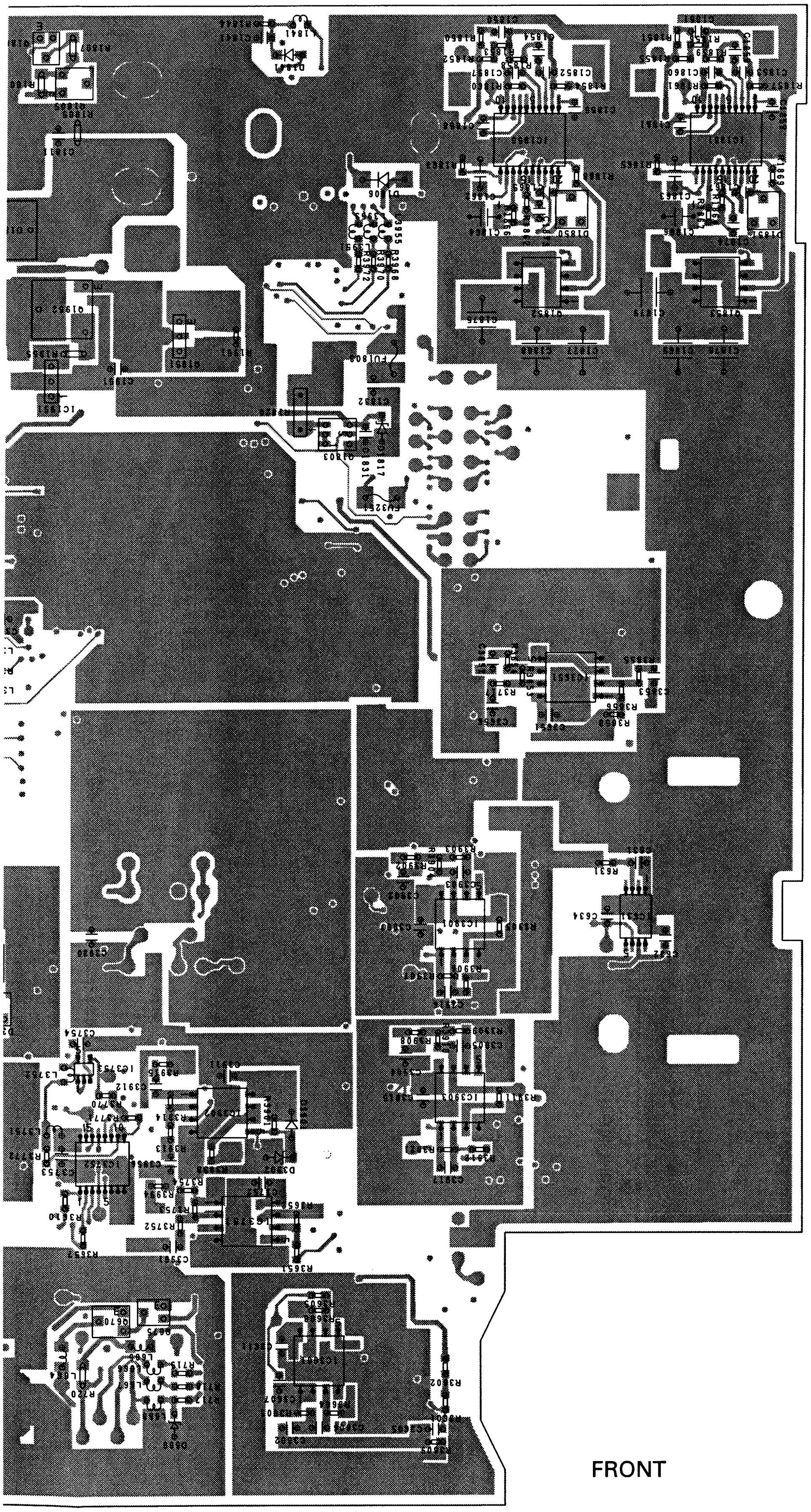

CN5004
FAN MOTOR
CORD ASSY
CONNECTION BOX
CN1801
CN3257
CN554
F
CN461
CN552
E
CN302
CN3258
CN3254
CN551
CN553
CN560
C
CN2851

A

A MAIN PCB



SIDE B



IC,Q

Q1806

Q1805

IC1851 IC1850

Q668

Q1952 Q1853 Q1852

Q663 IC609

Q1951 Q662

IC3006

IC1951 IC608

IC661

Q1803

IC3007

IC3004 IC605

IC606

IC3651

IC613

IC602

IC610

IC603 IC607

IC631 IC3901

Q3859 Q3858

IC3927 IC604 IC612

Q3857

Q551

Q665

IC3753

IC3851 IC3903

IC3902

IC3752

Q669

IC3002 IC3751

IC3001

IC3003

Q670 Q675

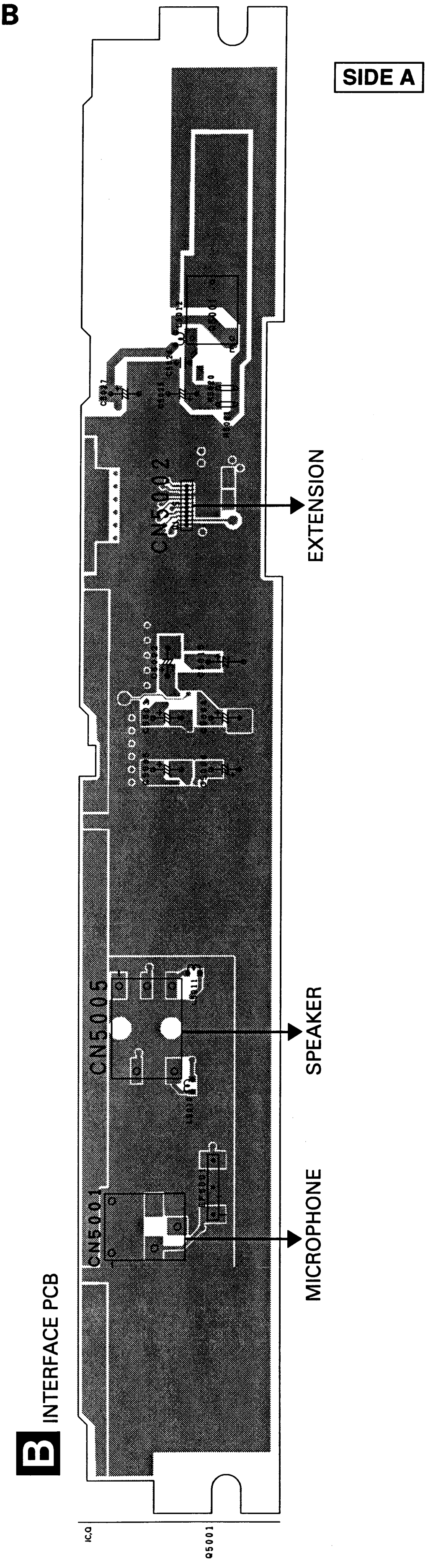
IC3005

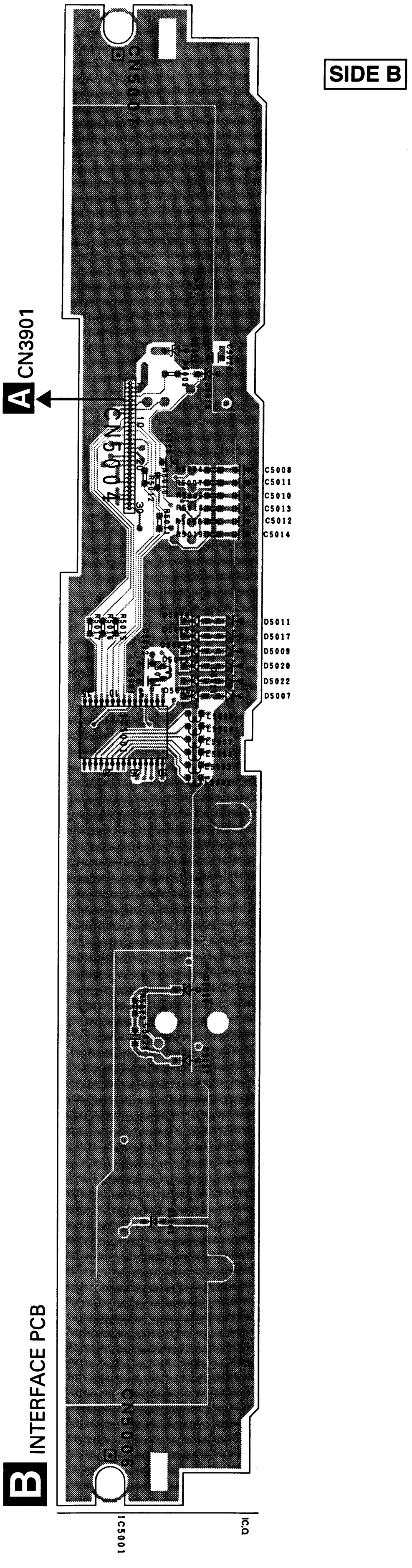
IC3601

Q3001

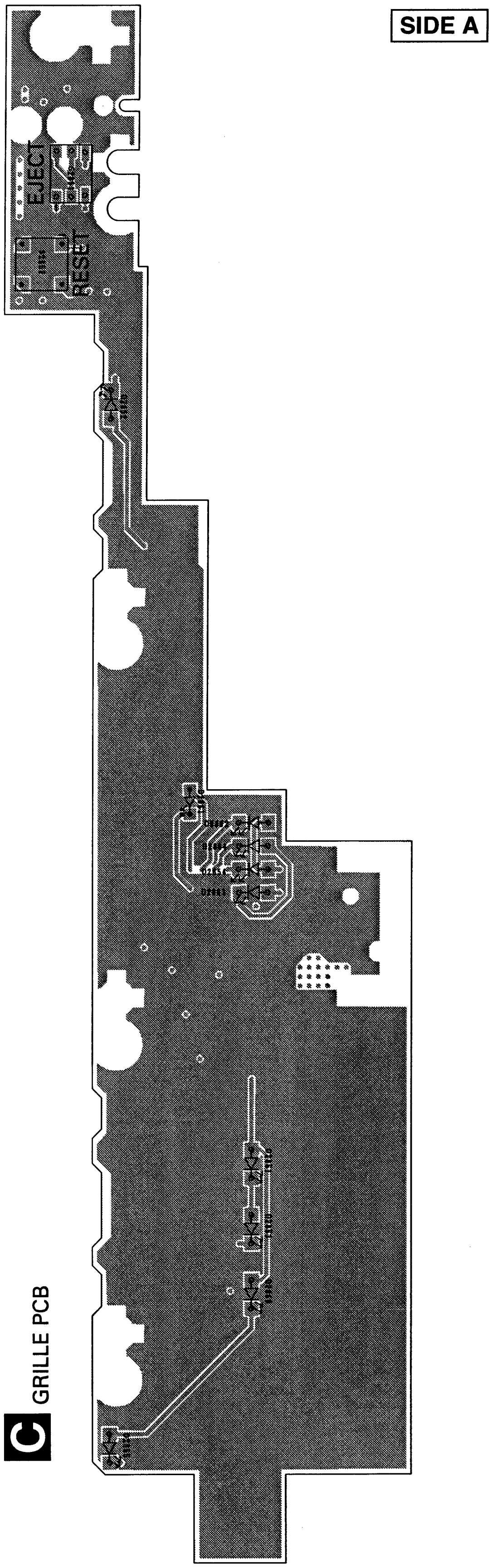
AVIC-9DVD

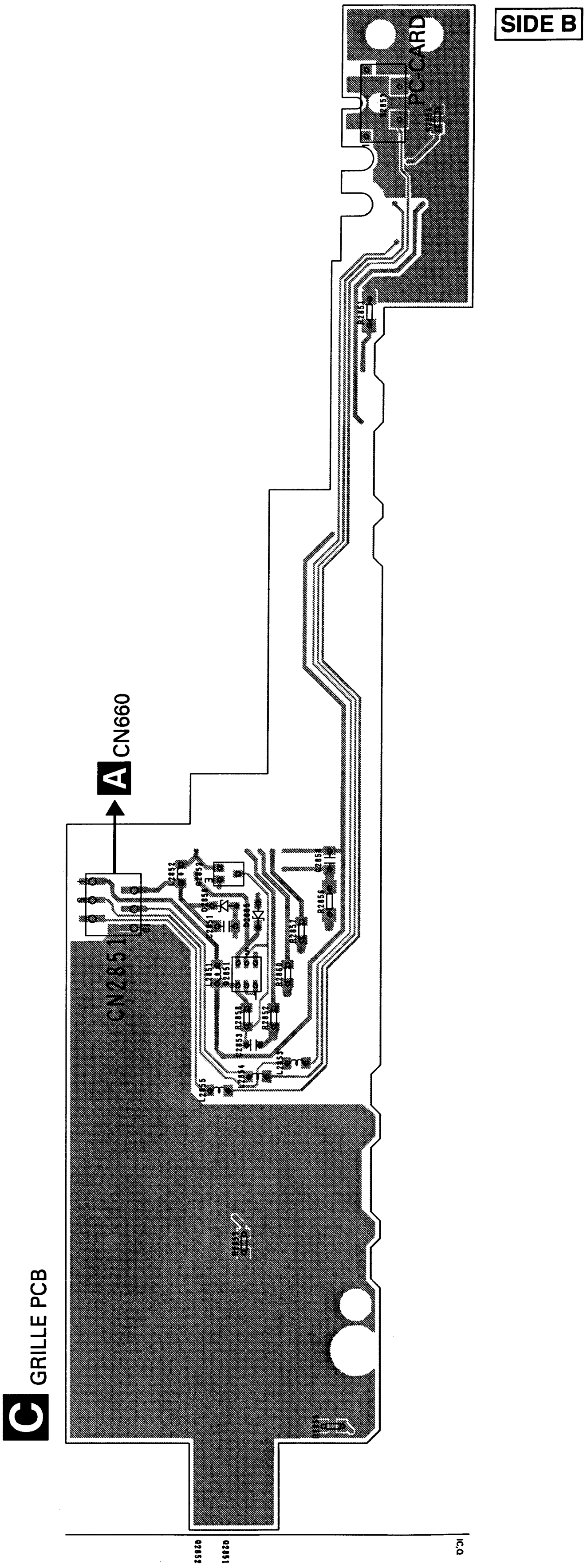
4.2 INTERFACE PCB


SIDE A
CN5002
EXTENSION
CN5005
SPEAKER
CN5001
MICROPHONE
B INTERFACE PCB
IC,Q
Q5001


SIDE B
CN5007
A CN3901
CN5004
C5008
C5011
C5010
C5013
C5012
C5014
D5011
D5017
D5009
D5020
D5022
D5007
CN5008
B INTERFACE PCB
IC5001
IC,Q

4.3 GRILLE PCB

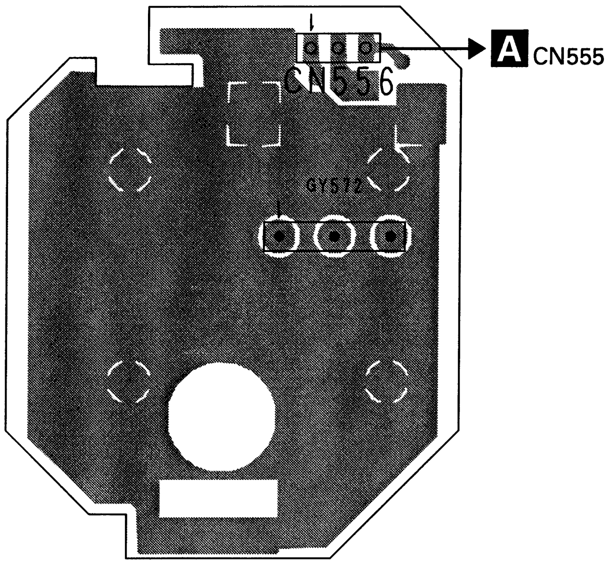

SIDE A
EJECT
RESET
C
GRILLE PCB


SIDE B
PC-CARD
A
CN660
CN2851
C
GRILLE PCB

4.4 G-SENSOR PCB

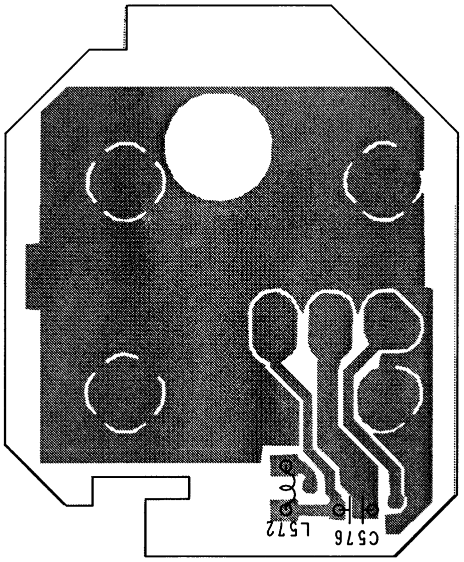
SIDE A

D G-SENSOR PCB


CN556
GY572
A CN555

SIDE B

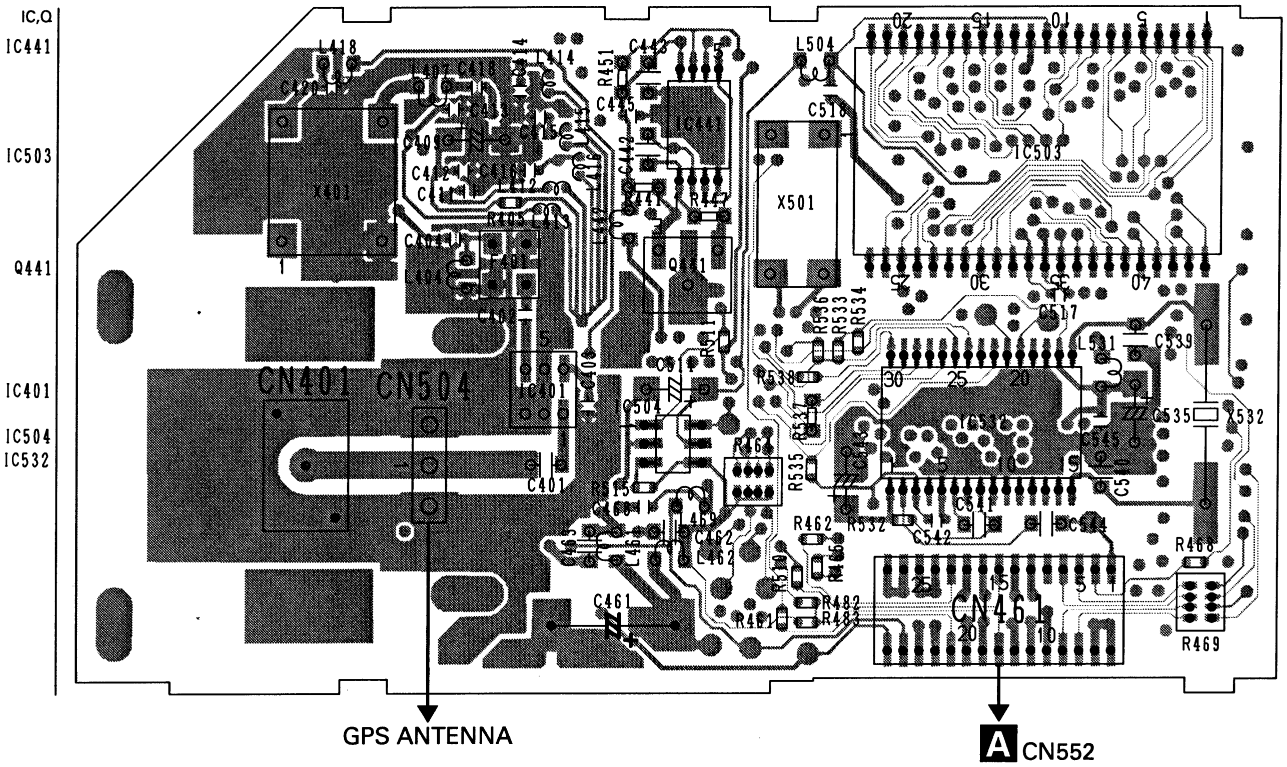
D G-SENSOR PCB



4.5 GPS UNIT

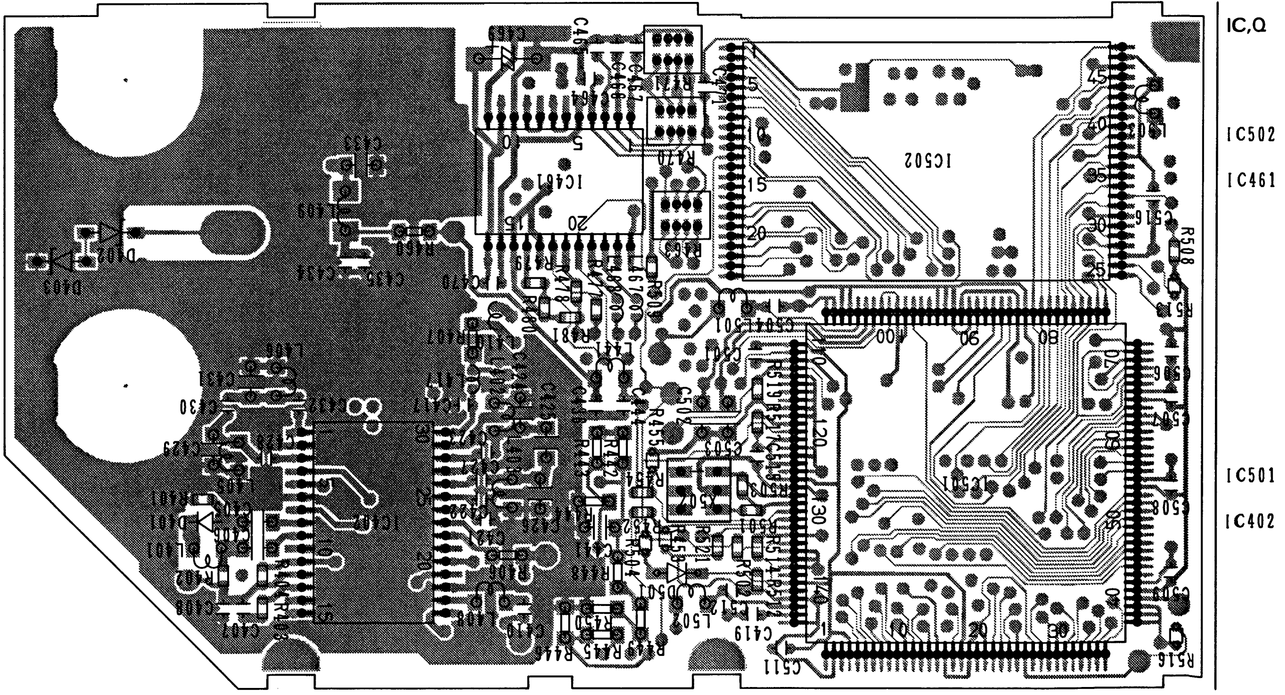
SIDE A

F GPS UNIT


IC,Q
IC441
IC503
Q441
IC401
IC504
IC532
X401
X501
CN401
CN504
IC441
IC503
Q441
IC401
IC532
CN461
C461
C401
R469
R468
X532
C535
C539
GPS ANTENNA
A CN552

SIDE B

F GPS UNIT


IC,Q
IC502
IC461
IC501
IC402
IC502
IC461
IC531
IC402
D401
D402
D403
C511
R516
R508

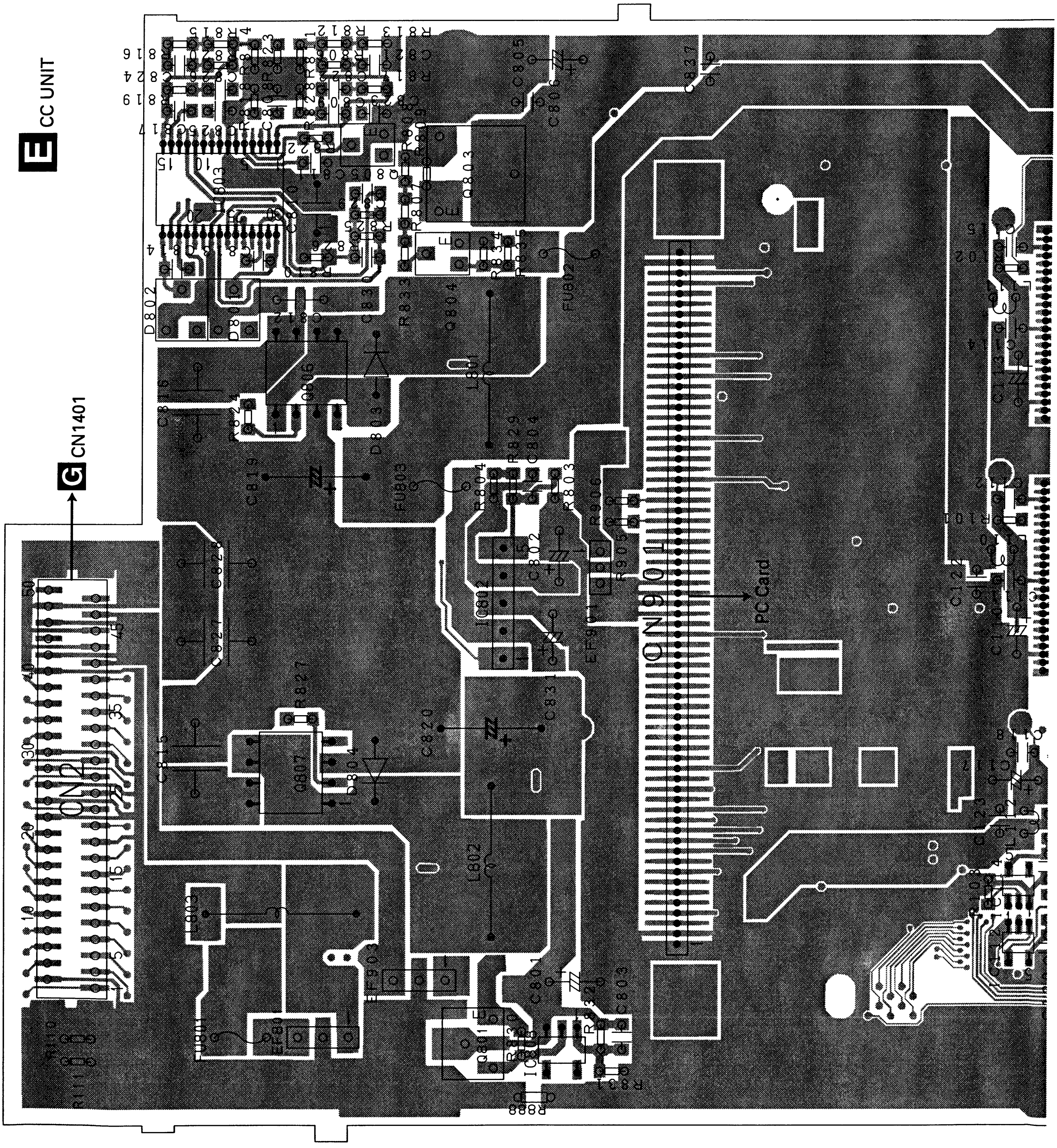
4.6 CC UNIT

A

B

C

D


E CC UNIT
G CN1401
CN2
CN901
PC Card
IC803
Q807
Q806
Q805
Q804
Q803
Q801
IC802
IC808
D802
D801
D803
D804
L801
L802
FU801
FU802
FU803
C819
C820
C831
C827
C828
C815
C816
C805
C806
C801
C803
C804
C812
C802
C830
R827
R833
R829
R804
R803
R806
R831
R888
R837
EF901
EF903
50
45
40
35
30
25
20
15
10
5
1

IC,Q

IC803

Q806 Q807

Q805

Q804

Q801 Q803

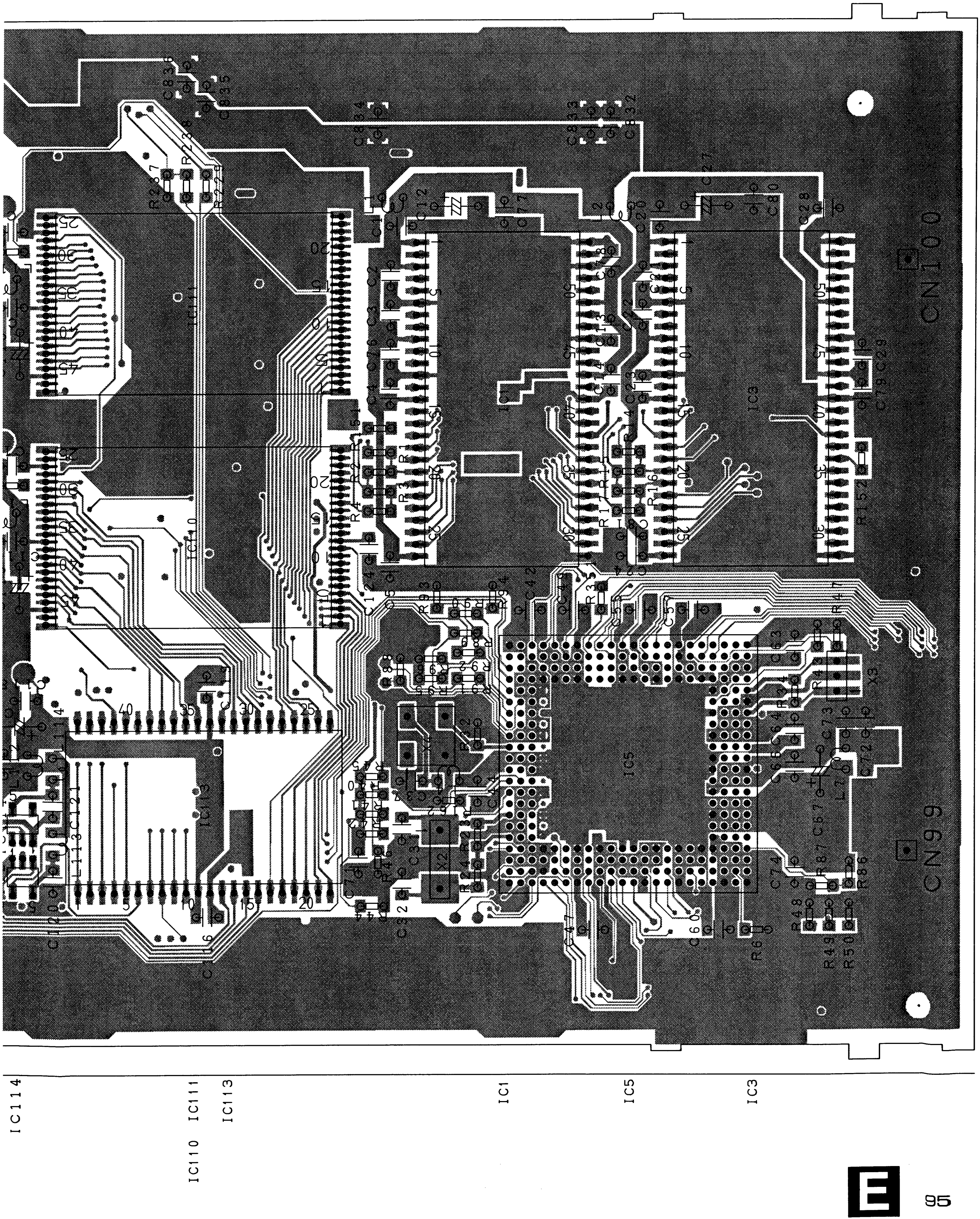
IC802

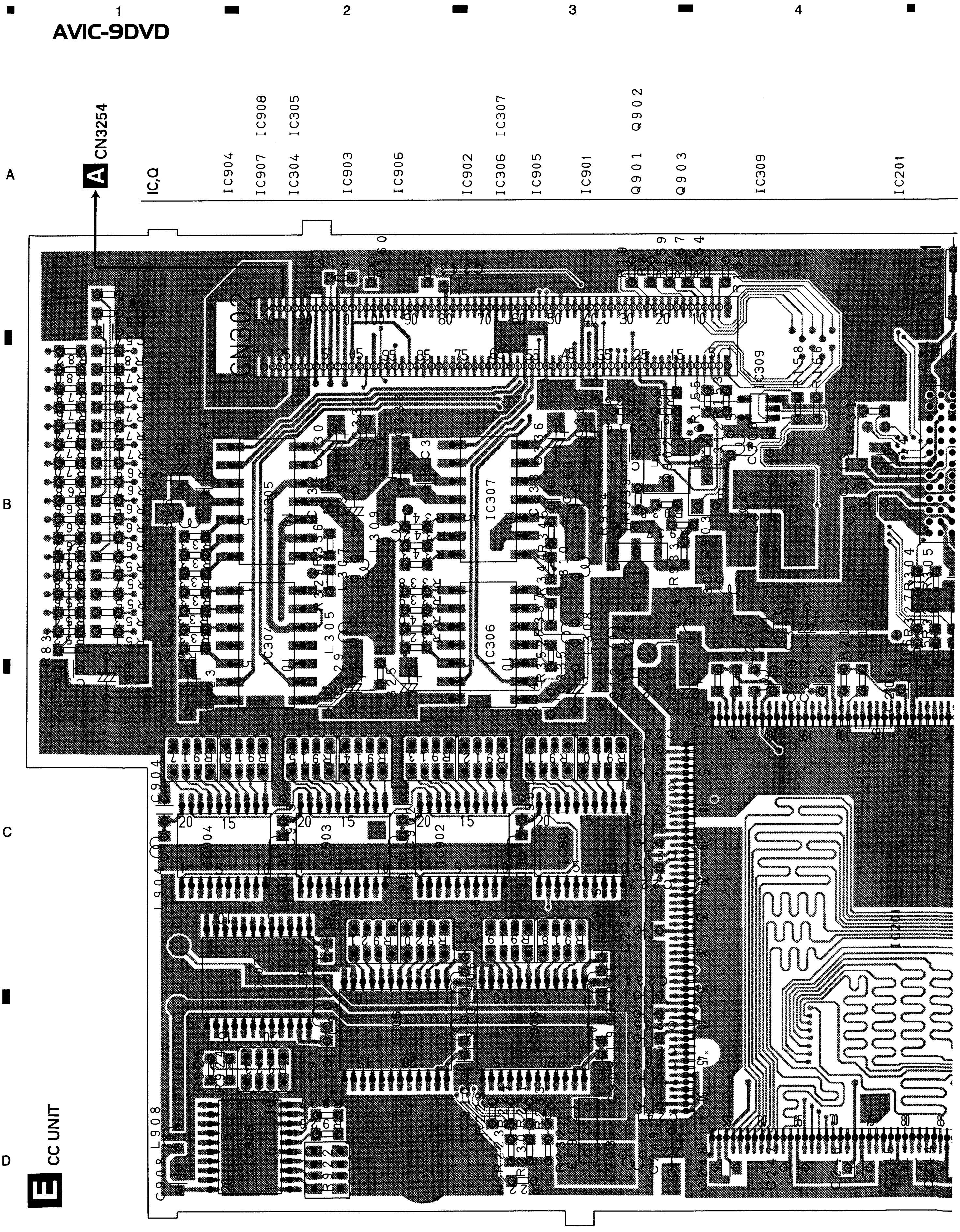
IC808

IC112

IC114

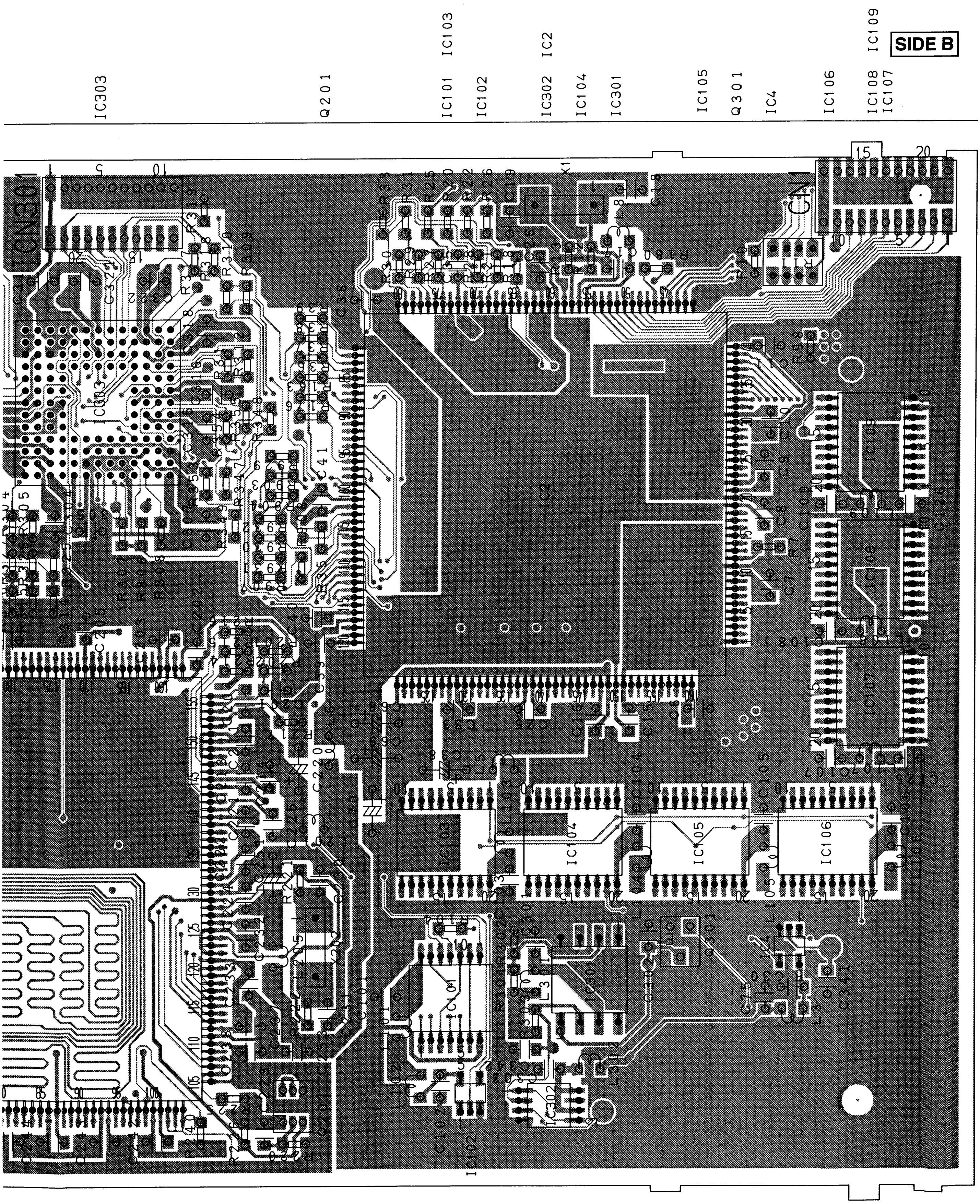
SIDE A


CN100
CN99
IC1
IC3
IC5
IC110
IC111
IC113
IC114
IC140
X1
X2
X3
IC114
IC110 IC111
IC113
IC1
IC5
IC3


1
2
3
4
A
B
C
D
A CN3254
IC,Q
IC904
IC907 IC908
IC304 IC305
IC903
IC906
IC902
IC306 IC307
IC905
IC901
Q901 Q902
Q903
IC309
IC201
CN302
CN301
IC304
IC305
IC306
IC307
IC904
IC903
IC902
IC901
IC906
IC905
IC908
IC201
IC309

E CC UNIT

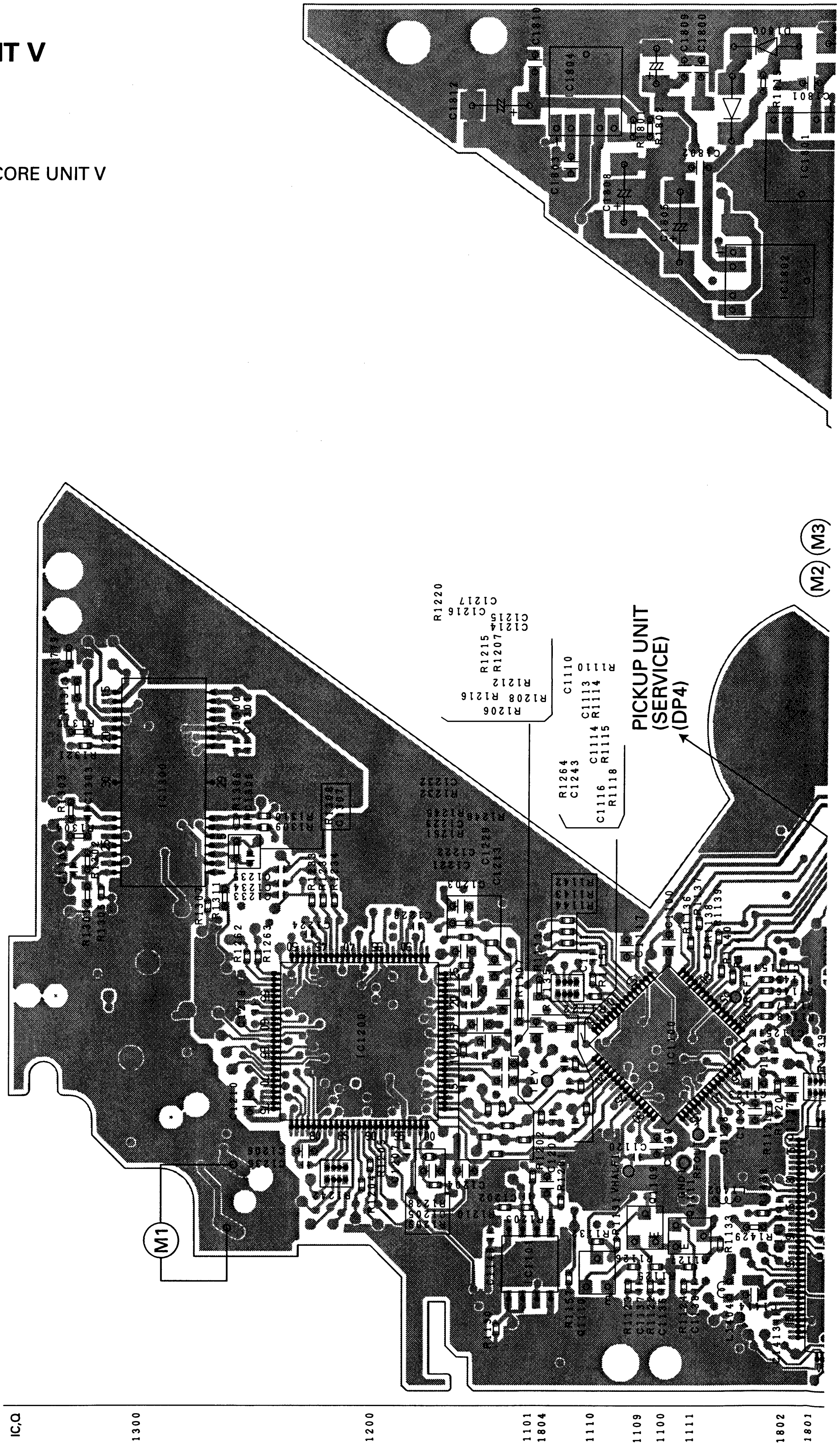
SIDE B


5
6
7
8
A
B
C
D
IC303
Q201
IC101
IC103
IC102
IC2
IC302
IC104
IC301
IC105
Q301
IC4
IC106
IC108
IC109
IC107
CN301
CN1
X1
IC303
IC2
IC109
IC108
IC107
IC103
IC104
IC105
IC106
IC101
IC301
IC302
Q201
IC102
C104
C105
C106
C109
C126
C108
C107
C341
L103
L105
L106
L101
L102

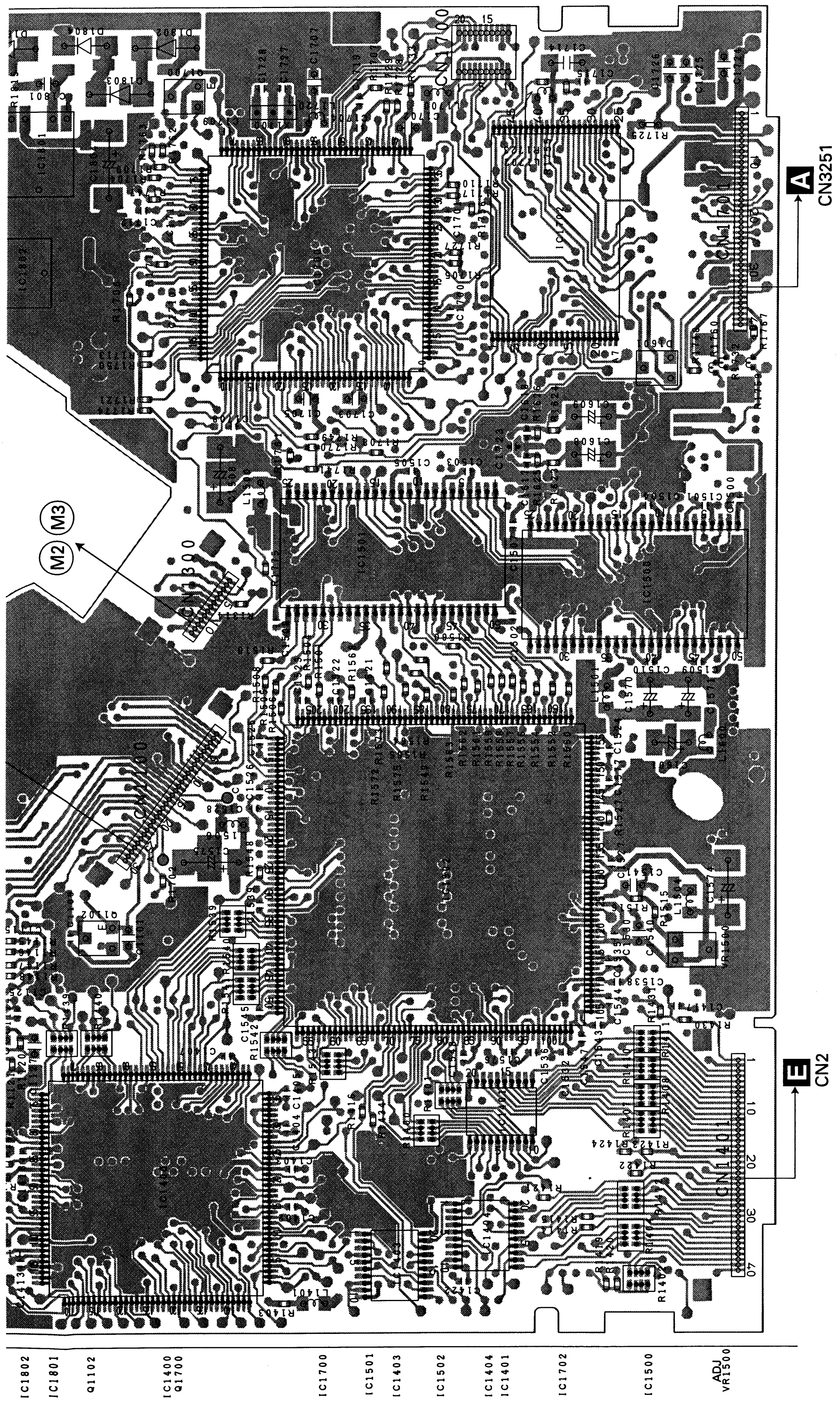
E

4.7 DVD CORE UNIT V

G DVD CORE UNIT V


A
B
C
D
PICKUP UNIT
(SERVICE)
(DP4)
M1
M2
M3
IC1300
IC1200
IC1100
IC1101
IC1802
IC1804
R1220
C1217
C1216
C1215
C1214
R1215
R1207
R1212
R1208
R1216
R1206
C1110
R1110
C1113
R1114
C1114
R1115
R1264
C1243
C1116
R1118
C1812
C1810
C1809
C1808
C1801
R1801
R1802
IC,Q
IC1300
IC1200
IC1101
IC1804
Q1110
Q1109
IC1100
Q1111
IC1802
IC1801

SIDE A


A
CN3251
E
CN2
M2
M3
CN1701
CN1401
IC1702
IC1501
IC1500
IC1502
IC1400
IC1802
VR1500
IC1802
IC1801
Q1102
IC1400
Q1700
IC1700
IC1501
IC1403
IC1502
IC1404
IC1401
IC1702
IC1500
ADJ
VR1500

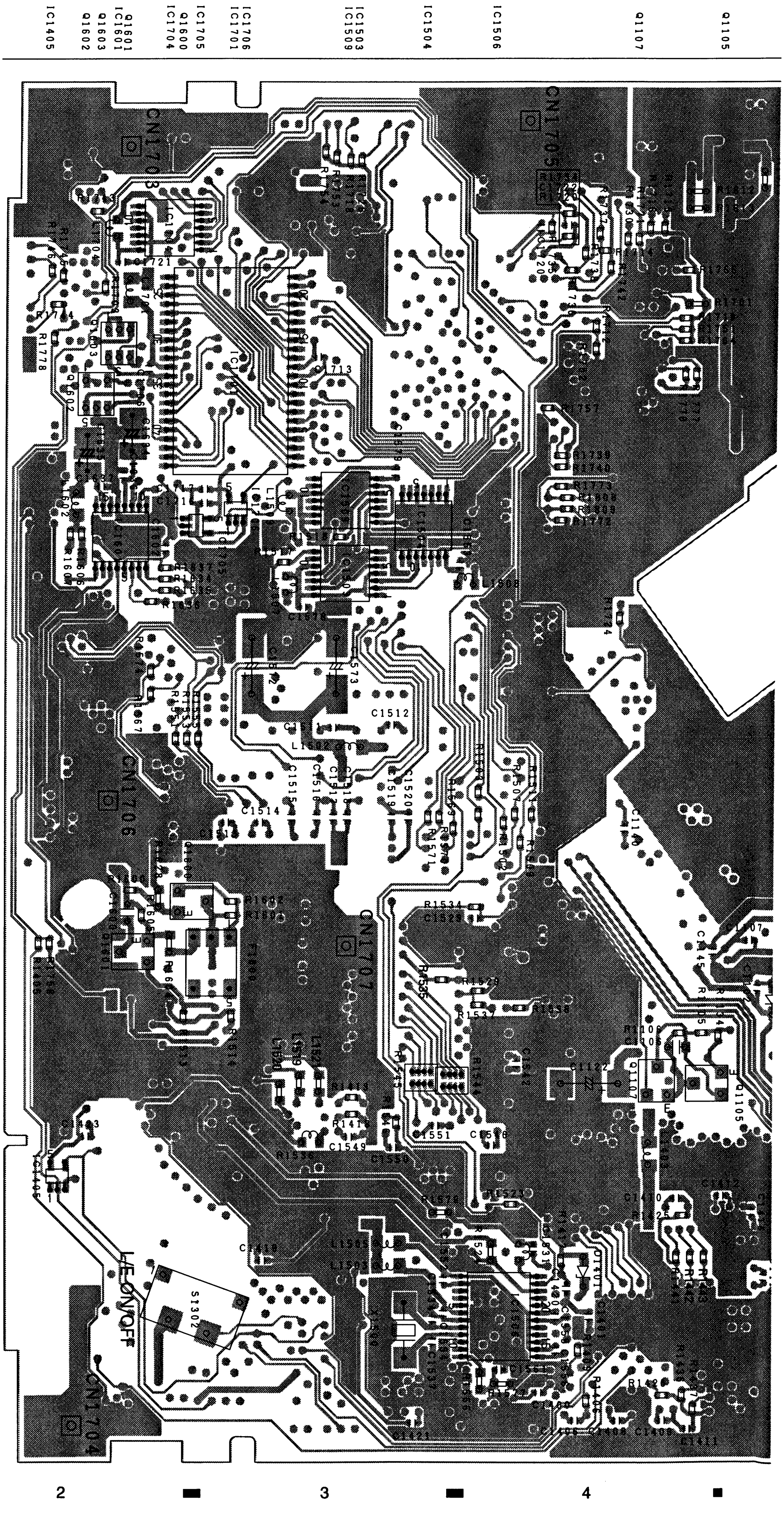
A

B

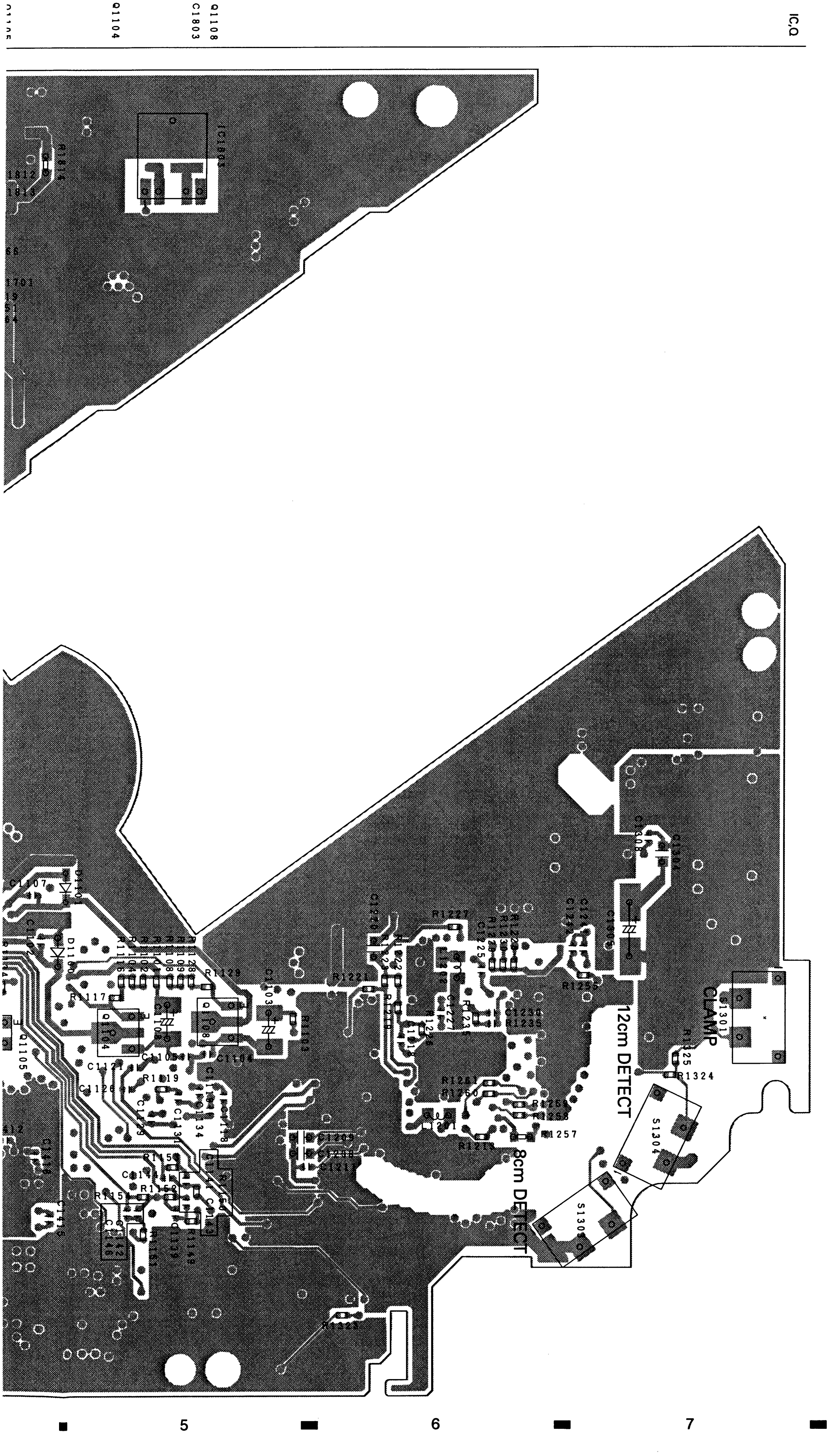
C

D

G DVD CORE UNIT V


1
2
3
4
A
B
C
D
IC1405
Q1601
IC1601
Q1603
Q1602
IC1705
Q1600
IC1704
IC1706
IC1701
IC1503
IC1509
IC1504
IC1506
Q1107
Q1105
CN1703
CN1705
CN1706
CN1707
CN1704
C1512
C1514
C1515
C1528
C1549
C1551
C1554
R1534
R1535
R1537
R1574
R1757
R1778
L1501
L1503
LE ON/OFF
S1302
Q1107
Q1105
C1107

SIDE B


Q1104
IC1803
Q1108
IC,Q
IC1803
R1814
12cm DETECT
8cm DETECT
CLAMP
S1301
S1304
S1303
R1324
R1325
R1257
R1255
R1227
R1221
R1217
R1117
R1119
R1129
R1151
R1153
C1107
C1121
C1126
C1141
C1151
C1205
C1206
C1211
Q1104
Q1108
Q1105
D1101

5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

  Chip Resistor

  RS1/○S○○○J,RS1/○○S○○○J

  Chip Capacitor (except for CQS.....)

  CKS....., CCS....., CSZS.....

E Unit Number : CWM7894
Unit Name : CC Unit

MISCELLANEOUS

=====Circuit Symbol and No.===		Part Name	Part No.
IC	1	IC	K4S281632C-TL1L
IC	2	IC	UPD705103GM-180
IC	3	IC	M2V2840ATP-7L
IC	4	IC	TC7SZ08FU
IC	5	IC	PD6336B
IC	101	IC	TC74LCX08FT
IC	102	IC	TC7SH04FU
IC	103	IC	TC74LCX245FT
IC	104	IC	TC74LCX245FT
IC	105	IC	TC74LCX245FT
IC	106	IC	TC74LCX245FT
IC	107	IC	TC74LCX541FT
IC	108	IC	TC74LCX541FT
IC	109	IC	TC74LCX541FT
IC	110	IC	PD6373C
IC	111	IC	PD6374C
IC	112	IC	TC7SH00FU
IC	113	IC	M5M5V216ATP-70HI
IC	114	IC	TC7SH08FU
IC	201	IC	MB86291PFVS-G-DL
IC	301	IC	M51957BFP
IC	302	IC	TC7WH08FU
IC	304	IC	PCM1725U
IC	305	IC	PCM1801U
IC	309	IC	TC7SH08FU
IC	802	IC	LP3965ES-ADJ
IC	803	IC	TPS5102IDBT
IC	901	IC	TC74VHCT541AFT
IC	902	IC	TC74VHCT541AFT
IC	903	IC	TC74VHCT541AFT
IC	904	IC	TC74VHCT541AFT
IC	905	IC	TC74LVX4245FS
IC	906	IC	TC74LVX4245FS
IC	907	IC	TC74LVX4245FS
IC	908	IC	TC74VHC541FT
Q	201	Transistor	UMD2N
Q	301	Transistor	DTC114EU
Q	803	Transistor	2SA1834F5
Q	804	Transistor	2SC4081
Q	805	Transistor	DTC114EU
Q	806	FET	RK4936
Q	807	FET	RK4936
Q	901	Transistor	2SA1797
Q	902	Transistor	2SC2712
Q	903	Transistor	DTA114EU
D	801	Diode	RB400D
D	802	Diode	RB400D
D	803	Diode	RB060L-40
D	804	Diode	RB060L-40
L	1	Inductor	CTF1558
L	2	Inductor	CTF1558
L	3	Inductor	CTF1410
L	5	Inductor	CTF1556
L	6	Inductor	CTF1295
L	7	Inductor	CTF1558
L	8	Inductor	CTF1556
L	101	Inductor	CTF1557
L	102	Inductor	CTF1557
L	103	Inductor	CTF1557
L	104	Inductor	CTF1557
L	105	Inductor	CTF1557
L	106	Inductor	CTF1557
L	107	Inductor	CTF1557
L	108	Inductor	CTF1557
L	109	Inductor	CTF1557
L	110	Inductor	CTF1556
L	111	Inductor	CTF1556
L	112	Inductor	CTF1556
L	113	Inductor	CTF1557
L	114	Inductor	CTF1557
L	201	Inductor	CTF1556
L	203	Inductor	CTF1556
L	204	Inductor	CTF1488
L	205	Inductor	CTF1556
L	206	Inductor	CTF1556
L	207	Inductor	CTF1379
L	301	Inductor	CTF1557
L	302	Inductor	CTF1557
L	305	Inductor	CTF1556
L	306	Inductor	CTF1556
L	307	Inductor	CTF1556
L	312	Inductor	CTF1410
L	801	Inductor	CTH1257
L	802	Inductor	CTH1257
L	803	Inductor	CTH1253
L	901	Inductor	CTF1410
L	902	Inductor	CTF1410
L	903	Inductor	CTF1410
L	904	Inductor	CTF1410
L	905	Inductor	CTF1410
L	906	Inductor	CTF1410
L	907	Inductor	CTF1410
L	908	Inductor	CTF1410
L	909	Inductor	CTF1410
L	910	Inductor	CTF1410
L	911	Inductor	CTF1410
TH	153	Thermistor	CCX1056
X	1	Radiator 30.0MHz	CSS1563
X	2	Radiator 33.0MHz	CSS1564
X	3	Radiator 33.86MHz	CSS1551
X	202	Radiator 14.31818MHz	CSS1562
FU	801	Fuse 4A	CEK1199
FU	802	Fuse 2.5A	CEK1209
FU	803	Fuse 2.5A	CEK1209
EF	801	EMI Filter	CCG1083

=====Circuit Symbol and No.===Part Name			Part No.
EF	901	EMI Filter	CCG1104
EF	902	EMI Filter	CCG1083
EF	903	EMI Filter	CCG1083

RESISTORS

=====Circuit Symbol and No.===Part Name			Part No.
R	2		RS1/16S0R0J
R	4		RS1/16S0R0J
R	5		RS1/16S473J
R	6		RS1/16S473J
R	7		RS1/16S220J
R	8		RS1/16S473J
R	9		RS1/16S473J
R	10		RS1/16S104J
R	11		RAB4C473J
R	12		RS1/16S105J
R	13		RS1/16S151J
R	15		RS1/16S0R0J
R	17		RS1/16S0R0J
R	18		RS1/16S0R0J
R	19		RS1/16S473J
R	20		RS1/16S101J
R	21		RS1/16S101J
R	22		RS1/16S101J
R	23		RS1/16S105J
R	24		RS1/16S151J
R	25		RS1/16S101J
R	26		RS1/16S101J
R	27		RS1/16S101J
R	28		RS1/16S101J
R	29		RS1/16S101J
R	30		RS1/16S101J
R	31		RS1/16S101J
R	32		RS1/16S473J
R	33		RS1/16S473J
R	34		RS1/16S105J
R	35		RS1/16S104J
R	36		RS1/16S101J
R	37		RS1/16S101J
R	38		RS1/16S101J
R	39		RS1/16S101J
R	40		RS1/16S0R0J
R	41		RS1/16S0R0J
R	42		RS1/16S0R0J
R	43		RS1/16S0R0J
R	44		RS1/16S0R0J
R	45		RS1/16S104J
R	46		RS1/16S104J
R	47		RS1/16S104J
R	48		RS1/16S104J
R	49		RS1/16S104J
R	50		RS1/16S104J
R	51		RS1/16S101J
R	52		RS1/16S101J
R	53		RS1/16S101J
R	54		RS1/16S101J
R	55		RS1/16S101J
R	57		RS1/16S101J
R	59		RS1/16S101J
R	60		RS1/16S101J
R	61		RS1/16S0R0J
R	62		RS1/16S101J
R	63		RS1/16S101J
R	64		RS1/16S101J
R	65		RS1/16S101J
R	66		RS1/16S101J

=====Circuit Symbol and No.===Part Name			Part No.
R	67		RS1/16S101J
R	68		RS1/16S101J
R	69		RS1/16S101J
R	70		RS1/16S101J
R	71		RS1/16S101J
R	72		RS1/16S101J
R	73		RS1/16S101J
R	74		RS1/16S101J
R	75		RS1/16S101J
R	76		RS1/16S101J
R	77		RS1/16S101J
R	78		RS1/16S101J
R	79		RS1/16S101J
R	80		RS1/16S101J
R	81		RS1/16S101J
R	82		RS1/16S101J
R	83		RS1/16S102J
R	84		RS1/16S562J
R	85		RS1/16S103J
R	87		RS1/16S104J
R	88		RS1/16S104J
R	89		RS1/16S0R0J
R	90		RS1/16S0R0J
R	93		RS1/16S153J
R	94		RS1/16S153J
R	95		RS1/16S153J
R	96		RS1/16S153J
R	97		RS1/16S473J
R	98		RS1/16S473J
R	101		RS1/16S473J
R	102		RS1/16S473J
R	103		RS1/16S473J
R	104		RS1/16S220J
R	111		RS1/16S0R0J
R	154		RS1/16S473J
R	155		RS1/16S473J
R	156		RS1/16S473J
R	157		RS1/16S473J
R	158		RS1/16S473J
R	159		RS1/16S473J
R	160		RS1/16S473J
R	161		RS1/16S103J
R	162		RS1/16S473J
R	163		RS1/16S560J
R	166		RS1/16S473J
R	176		RS1/16S0R0J
R	180		RS1/16S220J
R	201		RN1/16SE1502D
R	202		RN1/16SE1202D
R	210		RS1/16S104J
R	211		RS1/16S104J
R	212		RS1/16S104J
R	213		RS1/16S104J
R	217		RS1/16S272J
R	220		RS1/16S223J
R	221		RS1/16S105J
R	222		RS1/16S151J
R	224		RS1/16S0R0J
R	225		RS1/16S104J
R	226		RS1/16S104J
R	227		RS1/16S104J
R	228		RS1/16S104J
R	229		RS1/16S560J
R	230		RS1/16S104J
R	232		RS1/16S104J

=====Circuit Symbol and No.===Part Name			Part No.
R	237		RS1/16S104J
R	238		RS1/16S330J
R	240		RS1/16S104J
R	301		RS1/16S123J
R	302		RS1/16S103J
R	303		RS1/16S473J
R	320		RS1/16S201J
R	329		RS1/16S221J
R	330		RS1/16S221J
R	331		RS1/16S221J
R	332		RS1/16S221J
R	333		RS1/16S221J
R	334		RS1/16S221J
R	335		RS1/16S221J
R	336		RS1/16S221J
R	349		RS1/16S473J
R	803		RN1/16SE1002D
R	804		RN1/16SE3901D
R	806		RS1/16S101J
R	807		RS1/16S330J
R	808		RS1/16S330J
R	809		RS1/16S102J
R	810		RS1/16S100J
R	811		RN1/16SE1001D
R	812		RN1/16SE1501D
R	813		RN1/16SE3300D
R	814		RN1/16SE1001D
R	815		RN1/16SE3001D
R	816		RN1/16SE3300D
R	817		RS1/16S332J
R	818		RS1/16S473J
R	819		RS1/16S102J
R	820		RS1/16S101J
R	822		RS1/16S473J
R	823		RS1/16S104J
R	824		RS1/16S150J
R	825		RS1/16S224J
R	826		RS1/16S224J
R	827		RS1/16S150J
R	828		RS1/16S104J
R	829		RN1/16SE6801D
R	833		RS1/16S330J
R	834		RS1/16S102J
R	835		RS1/16S392J
R	903		RS1/16S101J
R	904		RS1/16S101J
R	905		RS1/16S101J
R	906		RS1/16S101J
R	907		RS1/16S101J
R	908		RS1/16S101J
R	910		RAB4C101J
R	911		RAB4C101J
R	912		RAB4C101J
R	913		RAB4C101J
R	914		RAB4C101J
R	915		RAB4C101J
R	916		RAB4C101J
R	917		RAB4C101J
R	918		RAB4C101J
R	919		RAB4C101J
R	920		RAB4C101J
R	921		RAB4C101J
R	922		RAB4C101J
R	923		RAB4C473J
R	924		RS1/16S473J

=====Circuit Symbol and No.===Part Name			Part No.
R	925		RS1/16S473J
R	926		RS1/16S101J
R	927		RS1/16S101J
R	929		RS1/16S104J
R	930		RS1/16S104J
R	931		RS1/16S104J
R	932		RS1/16S104J
R	933		RS1/16S270J
R	934		RS1/16S103J
R	935		RS1/16S472J
R	936		RS1/16S103J
R	937		RS1/16S270J
R	938		RS1/16S270J
R	939		RS1/16S270J

CAPACITORS

C	1		CKSRYB104K16
C	2		CKSRYB104K16
C	3		CKSRYB104K16
C	4		CKSRYB104K16
C	5		CKSRYB104K16
C	6		CKSRYB104K16
C	7		CKSRYB104K16
C	8		CKSRYB104K16
C	9		CKSRYB104K16
C	10		CKSRYB104K16
C	11		CKSRYB104K16
C	12		CSZSQ100M6R3
C	13		CKSRYB104K16
C	14		CKSRYB104K16
C	15		CKSRYB104K16
C	16		CKSRYB104K16
C	17		CKSRYB104K16
C	18		CCSRCH100D50
C	19		CCSRCH100D50
C	20		CKSRYB104K16
C	21		CKSRYB104K16
C	22		CKSRYB104K16
C	23		CKSRYB104K16
C	24		CKSRYB104K16
C	25		CKSRYB104K16
C	26		CKSRYB104K16
C	27		CSZSQ100M6R3
C	28		CKSRYB104K16
C	29		CKSRYB104K16
C	30		CKSRYF104Z25
C	31		CCSRCH5R0D50
C	32		CCSRCH5R0D50
C	33		CKSRYB104K16
C	35		CKSRYB104K16
C	36		CKSRYB104K16
C	38		CSZS100M10
C	39		CKSRYB104K16
C	40		CKSRYB104K16
C	41		CKSRYB104K16
C	42		CKSRYB104K16
C	44		CKSRYB104K16
C	47		CKSRYB104K16
C	49		CKSRYB104K16
C	54		CCSRCH121J50
C	55		CKSRYB104K16
C	57		CKSRYB104K16
C	60		CKSRYB104K16
C	63		CKSRYB104K16
C	64		CKSRYB104K16
C	66		CKSRYB104K16

=====Circuit Symbol and No.===Part Name			Part No.
C	67		CSZSQ100M6R3
C	68		CSZS330M6R3
C	69		CSZS330M6R3
C	70		CSZS330M6R3
C	71		CKSRYF103Z50
C	72		CKSRYF103Z50
C	73		CKSRYF104Z25
C	74		CKSRYF104Z25
C	75		CKSRYF104Z25
C	76		CKSRYB104K16
C	78		CKSRYB104K16
C	79		CKSRYB104K16
C	101		CKSRYB104K16
C	102		CKSRYB104K16
C	103		CKSRYB104K16
C	104		CKSRYB104K16
C	105		CKSRYB104K16
C	106		CKSRYB104K16
C	107		CKSRYB104K16
C	108		CKSRYB104K16
C	109		CKSRYB104K16
C	110		CSZSQ100M6R3
C	111		CKSRYB104K16
C	112		CKSRYF224Z16
C	113		CSZSQ100M6R3
C	114		CKSRYB104K16
C	115		CKSRYF224Z16
C	116		CKSRYF104Z25
C	117		CSZSQ100M6R3
C	118		CKSRYB104K16
C	119		CKSRYF104Z25
C	120		CKSRYF104Z25
C	121		CKSRYF104Z25
C	122		CKSRYF104Z25
C	123		CKSRYF103Z50
C	124		CCSRCH101J50
C	125		CKSRYF104Z25
C	126		CKSRYF104Z25
C	201		CKSRYB104K16
C	202		CKSRYB104K16
C	203		CKSRYB104K16
C	204		CKSRYB104K16
C	205		CKSRYB104K16
C	206		CKSRYB104K16
C	207		CKSRYB104K16
C	208		CKSRYB104K16
C	209		CKSRYB104K16
C	211		CKSRYB104K16
C	213		CKSRYB104K16
C	214		CKSRYB104K16
C	215		CKSRYB104K16
C	216		CKSRYB104K16
C	217		CKSRYB104K16
C	220		CSZS100M10
C	221		CKSRYB104K16
C	222		CKSRYB104K16
C	223		CKSRYB224K10
C	224		CKSRYB104K16
C	225		CKSRYB104K16
C	227		CKSRYB104K16
C	228		CKSRYB104K16
C	230		CCSRCH150J50
C	231		CCSRCH120J50
C	232		CKSRYB104K16
C	233		CKSRYB104K16
C	234		CKSRYB104K16
C	235		CKSRYB104K16
C	237		CKSRYB104K16
C	238		CKSRYB104K16
C	239		CKSRYB104K16
C	240		CKSRYB104K16
C	241		CKSRYB104K16
C	242		CKSRYB104K16
C	243		CKSRYB104K16
C	244		CKSRYB104K16
C	245		CKSRYB104K16
C	246		CKSRYB104K16
C	247		CKSRYB104K16
C	248		CKSRYB104K16
C	249		CSZS100M10
C	250		CSZS100M10
C	251		CSZS100M10
C	252		CSZS100M10
C	253		CKSRYF104Z25
C	301		CKSRYF104Z25
C	302		CKSRYB334K10
C	303		CKSRYF104Z25
C	306		CKSRYF104Z25
C	323		CSZS100M10
C	324		CKSRYB104K16
C	327		CSZS100M10
C	328		CKSRYB104K16
C	329		CSZS100M10
C	330		CSZS4R7M10
C	331		CSZS4R7M10
C	332		CKSRYB104K16
C	339		CSZS100M10
C	341		CCSRCH101J50
C	342		CKSRYF104Z25
C	343		CKSRYB102K50
C	802		CSZSR101M6R3
C	804		CCSRCH680J50
C	805		CSZSR101M6R3
C	806		CKSRYB104K16
C	808		CKSRYB105K10
C	809		CCSRCH101J50
C	810	4.7µF	CCG1111
C	811		CCSRCH470J50
C	812		CKSYB475K10
C	813		CKSRYF474Z16
C	814		CKSRYF474Z16
C	815	10µF	CCG1150
C	816	10µF	CCG1150
C	817		CCSRCH221J50
C	819	330µF/6.3V	CCH1366
C	820	330µF/6.3V	CCH1366
C	821		CKSRYB682K50
C	822		CKSRYB224K10
C	823		CKSRYB103K25
C	824		CKSRYB223K25
C	825		CKSRYB103K25
C	826		CKSRYB104K16
C	827	10µF	CCG1150
C	828	10µF	CCG1150
C	829		CKSRYF104Z25
C	830		CKSRYF104Z25
C	831		CSZS100M6R3
C	832		CKSRYF103Z50
C	833		CKSRYF104Z25
C	834		CKSRYF103Z50

=====Circuit Symbol and No.===Part Name			Part No.
C	835		CKSRYF103Z50
C	836		CKSRYF104Z25
C	837		CKSRYF103Z50
C	901		CKSRYF104Z25
C	902		CKSRYF104Z25
C	903		CKSRYF104Z25
C	904		CKSRYF104Z25
C	905		CKSRYF104Z25
C	906		CKSRYF104Z25
C	907		CKSRYF104Z25
C	908		CKSRYF104Z25
C	909		CKSRYF104Z25
C	910		CKSRYF104Z25
C	911		CKSRYF104Z25
C	912		CKSRYF104Z25
C	913		CKSRYF104Z25
C	914		CKSRYB334K10

F Unit Number : CWX2591
Unit Name : GPS Unit

MISCELLANEOUS

IC	401	IC	UPC2749T
IC	402	IC	UPB1006GS
IC	441	IC	NJM2100V
IC	461	IC	ADC12034CIMSA
IC	501	IC	PD3390A
IC	502	IC	PD6362B
IC	503	IC	M5M5V216ATP-70HI
IC	504	IC	MAX6364PUT29
Q	441	Transistor	2SB1132
D	401	Diode	1SV314
D	501	Diode	RB751V40
L	401	Inductor	CTF1549
L	402	Inductor	CTF1486
L	403	Inductor	CTF1486
L	404	Inductor	LCSA3N3R1608
L	405	Inductor	LCYB22NJ1608
L	406	Inductor	LCYB22NJ1608
L	407	Inductor	CTF1410
L	408	Inductor	CTF1556
L	409	Inductor	LCTB1R0K2125
L	410	Inductor	CTF1547
L	412	Inductor	CTF1547
L	413	Inductor	CTF1547
L	414	Inductor	CTF1547
L	415	Inductor	CTF1547
L	416	Inductor	CTF1547
L	417	Inductor	CTF1547
L	418	Inductor	CTF1410
L	441	Inductor	CTF1410
L	442	Inductor	CTF1410
L	461	Inductor	CTF1410
L	462	Inductor	CTF1410
L	467	Inductor	CTF1547
L	468	Inductor	CTF1547
L	469	Inductor	CTF1410
L	501	Inductor	CTF1410
L	502	Inductor	CTF1410
L	503	Inductor	CTF1410
L	504	Inductor	CTF1410
L	531	Inductor	CTF1410
X	401	TCXO 16.368MHz	CWX2381
X	501	Radiator 32.768kHz	CSS1319
X	502	Radiator 20.00MHz	CSS1549
F	401	Filter	CTF1548

=====Circuit Symbol and No.===Part Name			Part No.

RESISTORS

R	401		RS1/16SS472J
R	402		RS1/16SS472J
R	403		RS1/16SS122J
R	404		RS1/16SS622J
R	405		RS1/16SS100J
R	406		RS1/16S271J
R	407		RS1/16S2R2J
R	441		RN1/16SE10R0D
R	442		RN1/16SE1501D
R	443		RN1/16SE2402D
R	444		RN1/16SE3302D
R	445		RN1/16SE4702D
R	446		RN1/16SE4702D
R	447		RS1/16S432J
R	448		RN1/16SE1002D
R	449		RN1/16SE2202D
R	450		RN1/16SE3302D
R	451		RS1/16S103J
R	452		RS1/16SS102J
R	454		RS1/16SS102J
R	460		RS1/16S0R0J
R	461		RS1/16SS102J
R	462		RS1/16SS102J
R	463		RAB4CQ102J
R	464		RAB4CQ333J
R	465		RS1/16SS102J
R	470		RAB4CQ471J
R	471		RAB4CQ104J
R	477		RS1/16SS222J
R	478		RS1/16SS222J
R	479		RS1/16SS222J
R	480		RS1/16SS332J
R	481		RS1/16SS332J
R	482		RS1/16SS223J
R	483		RS1/16SS473J
R	501		RS1/16SS0R0J
R	502		RS1/16SS102J
R	503		RS1/16SS154J
R	508		RS1/16SS103J
R	509		RS1/16SS473J
R	510		RS1/16SS102J
R	511		RS1/16SS103J
R	512		RS1/16SS473J
R	513		RS1/16SS103J
R	514		RS1/16SS473J
R	515		RS1/16SS473J
R	517		RS1/16SS103J
R	519		RS1/16SS473J
R	521		RS1/16SS473J
R	533		RS1/16SS103J
R	534		RS1/16SS103J
R	535		RS1/16SS103J
R	536		RS1/16SS0R0J

CAPACITORS

C	401		CCSRCH100D50
C	402		CCSSCH101J50
C	403		CKSSYB104K10
C	404		CCSSCH101J50
C	405		CCSRUJ220J50
C	406		CCSRUJ220J50
C	407		CKSSYB333K16
C	408		CKSSYB182K50
C	409		CSZS100M6R3
C	410		CKSSYB103K16

=====Circuit Symbol and No.		===Part Name	Part No.
C	411		CKSSYB102K50
C	412		CKSSYB102K50
C	413		CKSSYB104K10
C	414		CKSSYB104K10
C	415		CKSSYB104K10
C	416		CKSSYB104K10
C	417		CKSSYB104K10
C	418		CKSSYB102K50
C	419		CKSSYB104K10
C	420		CKSSYB104K10
C	421		CKSSYB102K50
C	422		CKSSYB103K16
C	423		CKSSYB104K10
C	424		CCSRCH102J50
C	425		CCSRCH271J50
C	426		CCSRCH102J50
C	427		CKSSYB104K10
C	428		CKSSYB103K16
C	429		CCSRCH301J50
C	430		CCSSCH120J50
C	431		CCSRCH301J50
C	432		CKSSYB103K16
C	433		CCSRCH101J50
C	434		CKSSYB102K50
C	435		CKSSYB103K16
C	436		CKSSYB104K10
C	441		CKSRYB104K16
C	442		CCSRCH101J50
C	443		CKSRYB104K16
C	444		CKSSYB103K16
C	445		CKSSYB104K10
C	461	22μF/6.3V	CCH1408
C	462		CKSRYB104K16
C	463		CKSRYB104K16
C	464		CKSSYB103K16
C	465		CKSSYB103K16
C	466		CKSSYB103K16
C	467		CKSSYB103K16
C	468		CKSSYB104K10
C	469		CSZS100M10
C	470		CKSSYB104K10
C	471		CCSSCH101J50
C	501		CKSSYB104K10
C	502		CCSRCH150J50
C	503		CCSRCH150J50
C	504		CKSSYB104K10
C	506		CKSSYB104K10
C	507		CKSSYB104K10
C	508		CKSSYB104K10
C	509		CKSSYB104K10
C	511		CKSSYB104K10
C	512		CKSSYB104K10
C	514		CSZS100M6R3
C	515		CKSSYB104K10
C	516		CKSSYB104K10
C	517		CKSSYB104K10
C	518		CKSSYB104K10

Main Unit
Consists of
Main PCB
Interface PCB
Grille PCB
G-Sensor PCB

A B C D Unit Number : CWM7614
Unit Name : Main Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	571	IC	S-81250SGUP
IC	601	IC	PE5228A
IC	602	IC	TC7SET08FU
IC	603	IC	TC7SET08FU
IC	604	IC	TC7SH08FU
IC	605	IC	TC7SH08FU
IC	606	IC	TC7S14FU
IC	607	IC	TC7SET08FU
IC	608	IC	TC7W32FU
IC	609	IC	TC7SH04FU
IC	610	IC	TC7W126FU
IC	612	IC	TC7SET08FU
IC	613	IC	TC7SET08FU
IC	631	IC	S-8423AFS
IC	661	IC	PAJ002A
IC	662	IC	TPD1018F
IC	663	IC	TPD1018F
IC	665	IC	NJM2904M
IC	1801	IC	NJM2903V
IC	1850	IC	TPS5103IDB
IC	1851	IC	TPS5103IDB
IC	1951	IC	M5237ML
IC	3001	IC	TC7S66F
IC	3002	IC	TC7SET08F
IC	3004	IC	TC7SZ08FU
IC	3005	IC	CXA1645M
IC	3006	IC	NJM2246M
IC	3007	IC	NJM2244M
IC	3601	IC	NJM3404AM
IC	3602	IC	NJM2904M
IC	3752	IC	TC74HC4053AFT
IC	3753	IC	TC7SET08FU
IC	3851	IC	NJM3404AM
IC	3901	IC	NJM2068MD
IC	3902	IC	NJM3414AM
IC	3903	IC	NJM2068MD
IC	3926	IC	TDA7052A
IC	3927	IC	NJM2904M
IC	3951	IC	NJM4558M
IC	3952	IC	TC7S66FU
IC	3953	IC	NJM4558M
IC	5001	IC	UPD4723GS
Q	635	Transistor	2SA1036K
Q	636	Transistor	DTC114EU
Q	661	Transistor	2SB1184F5
Q	662	Transistor	DTC114EU
Q	664	Transistor	DTC114EU
Q	665	Transistor	2SA1162
Q	667	Transistor	2SC2712
Q	668	Transistor	2SC2712
Q	669	Transistor	DTC114EU
Q	670	Transistor	DTB113ZK
Q	671	Transistor	UMD2N
Q	672	Transistor	UMD2N
Q	673	Transistor	DTC114EU

=====Circuit Symbol and No.===Part Name			Part No.
Q	675	Transistor	DTC143EU
Q	1802	Transistor	DTC114EU
Q	1803	Transistor	IMD3A
Q	1804	Transistor	2SD2098
Q	1805	Transistor	2SA1037K
Q	1806	Transistor	DTC114EU
Q	1841	Transistor	2SA1037K
Q	1842	Transistor	DTC114EU
Q	1852	FET	RK4936
Q	1853	FET	RK4936
Q	1951	Transistor	2SB1572
Q	1952	Transistor	2SB1184F5
Q	1953	Transistor	DTC114EU
Q	2851	Transistor	IMD3A
Q	2852	Transistor	DTC114EU
Q	3001	Transistor	2SC2712
Q	3151	Transistor	2SC2712
Q	3851	Transistor	DTC323TU
Q	3852	Transistor	DTC323TU
Q	3853	Transistor	DTC323TU
Q	3854	Transistor	DTC323TU
Q	3855	Transistor	DTC323TU
Q	3856	Transistor	DTC323TU
Q	3857	Transistor	IMD2A
Q	3858	Transistor	IMD2A
Q	3859	Transistor	IMD2A
Q	3901	Transistor	DTC144EU
Q	3902	Transistor	DTC323TK
Q	3903	Transistor	DTC323TK
Q	3904	Transistor	IMD2A
Q	3905	Transistor	DTC323TU
Q	3906	Transistor	DTC144EU
Q	3907	Transistor	IMD2A
Q	5001	Transistor	2SD1760F5
D	552	Diode	UDZS5R6(B)
D	601	Diode	1SS355
D	661	Diode	RB751V40
D	663	Diode	UDZ20(B)
D	664	Diode	UDZS6R8(B)
D	665	Diode	1SS355
D	666	Diode	1SS355
D	667	Diode	1SS355
D	668	Diode	1SS355
D	669	Diode	UDZS6R8(B)
D	670	Diode	RB500V-40
D	671	Diode	RB500V-40
D	1801	Diode	5KP22A
D	1803	Diode	MA738
D	1804	Diode	S1G-6904G2P
D	1805	Diode	S1G-6904G2P
D	1806	Diode	S1G-6904G2P
D	1807	Diode	S1G-6904G2P
D	1808	Diode	S1G-6904G2P
D	1809	Diode	MA8180(M)
D	1810	Diode	MA8180(M)
D	1811	Diode	MA8180(M)
D	1812	Diode	KS926S2
D	1817	Diode	UDZ13(B)
D	1818	Diode	HZU7R5(B3)
D	1841	Diode	MA110
D	1850	Diode	RB400D
D	1851	Diode	RB400D
D	1852	Diode	RB060L-40
D	1853	Diode	RB060L-40
D	1951	Diode	S1G-6904G2P

=====Circuit Symbol and No.===Part Name			Part No.
D	2851	LED	CL150PGCD(AB)
D	2852	LED	CL150PGCD(AB)
D	2853	LED	CL150PGCD(AB)
D	2854	Diode	CL150RCD
D	2855	LED	CL150PGCD(AB)
D	2856	Diode	MA8062(H)
D	2860	LED	CL150PGCD(AB)
D	2861	Chip LED	CL220UBXTS
D	2862	Diode	CL150RCD
D	2863	LED	CL150PGCD(AB)
D	2864	LED	CL150PGCD(AB)
D	2865	Diode	MA8062(H)
D	3001	Diode	UDZS10(B)
D	3002	Diode	UDZS10(B)
D	3003	Diode	UDZS10(B)
D	3004	Diode	UDZS10(B)
D	3005	Diode	UDZS10(B)
D	3151	Diode	UDZS6R8(B)
D	3153	Diode	UDZS6R8(B)
D	3154	Diode	UDZS6R8(B)
D	3155	Diode	UDZS10(B)
D	3156	Diode	UDZS10(B)
D	3158	Diode	UDZS10(B)
D	3159	Diode	UDZS10(B)
D	3160	Diode	UDZS10(B)
D	3851	Diode	DAP202U
D	3852	Diode	DAP202U
D	3853	Diode	DAP202U
D	3901	Diode	1SS355
D	3902	Diode	MA8047(M)
D	3904	Diode	DAP202U
D	3905	Diode	1SS355
D	5001	Diode	UDZS6R8(B)
D	5006	Diode	MA8120(H)
D	5007	Diode	MA8120(H)
D	5008	Diode	MA8120(H)
D	5009	Diode	MA8120(H)
D	5010	Diode	MA8120(H)
D	5011	Diode	MA8120(H)
D	5016	Diode	MA8120(H)
D	5017	Diode	MA8120(H)
D	5018	Diode	UDZS6R8(B)
D	5019	Diode	MA8120(H)
D	5020	Diode	MA8120(H)
D	5021	Diode	MA8120(H)
D	5022	Diode	MA8120(H)
D	5027	Diode	MA8110(H)
D	5028	Diode	MA8110(H)
D	5029	Diode	MA8056(H)
L	571	Inductor	CTF1295
L	572	Inductor	CTF1295
L	573	Inductor	CTF1295
L	601	Inductor	CTF1410
L	602	Inductor	CTF1410
L	603	Inductor	CTF1410
L	604	Inductor	CTF1410
L	605	Inductor	CTF1410
L	606	Inductor	CTF1410
L	607	Inductor	CTF1410
L	608	Inductor	CTF1410
L	609	Inductor	CTF1410
L	610	Inductor	CTF1410
L	611	Inductor	CTF1410
L	612	Inductor	CTF1410
L	661	Inductor	CTF1295

=====Circuit Symbol and No.===Part Name			Part No.
L	664	Inductor	CTF1390
L	665	Inductor	CTF1295
L	666	Inductor	CTF1410
L	667	Inductor	CTF1410
L	668	Inductor	CTF1410
L	1802	Inductor	CTF1556
L	1803	Inductor	CTF1556
L	1804	Inductor	CTF1556
L	1805	Inductor	CTF1556
L	1806	Inductor	CTF1556
L	1841	Inductor	CTF1556
L	1850	Inductor	CTH1254
L	1851	Inductor	CTH1255
L	1852	Inductor	CTH1257
L	1853	Inductor	CTH1257
L	2851	Inductor	CTF1295
L	2852	Inductor	CTF1295
L	2853	Inductor	CTF1295
L	2854	Inductor	CTF1295
L	2855	Inductor	CTF1295
L	3001	Inductor	CTF1410
L	3002	Inductor	CTF1410
L	3003	Inductor	CTF1410
L	3005	Inductor	LCTA680J3225
L	3006	Inductor	CTF1410
L	3025	Inductor	CTF1410
L	3151	Inductor	CTF1557
L	3152	Inductor	CTF1558
L	3153	Inductor	CTF1557
L	3154	Inductor	CTF1557
L	3157	Inductor	CTF1306
L	3158	Inductor	CTF1306
L	3159	Inductor	CTF1306
L	3251	Inductor	CTF1556
L	3252	Inductor	CTF1556
L	3253	Inductor	CTF1556
L	3254	Inductor	CTF1556
L	3255	Inductor	CTF1556
L	3256	Inductor	CTF1556
L	3257	Inductor	CTF1556
L	3258	Inductor	CTF1556
L	3259	Inductor	CTF1557
L	3260	Inductor	CTF1557
L	3261	Inductor	CTF1557
L	3262	Inductor	CTF1557
L	3263	Inductor	CTF1557
L	3264	Inductor	CTF1557
L	3265	Inductor	CTF1557
L	3266	Inductor	CTF1557
L	3267	Inductor	CTF1557
L	3268	Inductor	CTF1557
L	3269	Inductor	CTF1557
L	3270	Inductor	CTF1557
L	3271	Inductor	CTF1557
L	3272	Inductor	CTF1557
L	3273	Inductor	CTF1557
L	3274	Inductor	CTF1556
L	3751	Inductor	CTF1410
L	3752	Inductor	CTF1410
L	3951	Inductor	CTF1410
L	3952	Inductor	CTF1410
L	3953	Inductor	CTF1410
L	3954	Inductor	CTF1410
L	3955	Inductor	CTF1410
L	3956	Inductor	CTF1410

=====Circuit Symbol and No.===Part Name			Part No.
L	5001	Inductor	CTF1410
L	5002	Inductor	CTF1334
L	5003	Inductor	CTF1334
L	5004	Inductor	CTF1334
L	5007	Inductor	CTF1334
L	5008	Inductor	CTF1334
L	5009	Inductor	CTF1334
L	5010	Inductor	CTF1557
L	5011	Inductor	CTF1557
L	5012	Inductor	CTF1557
X	601	Ceramic Resonator 12.583MHz	CSS1108
S	2851	Switch(EJECT)	CSG1106
S	2852	Switch(RESET)	CSG1120
S	2853	Spring Switch(PC-CARD)	CSN1051
FU	1801	Fuse 2A	CEK1190
FU	1802	Fuse 4A	CEK1199
FU	1803	Fuse 2.3A	ICPS2R3
FU	1804	Fuse 4A	CEK1199
FU	1850	Fuse 1A	CEK1191
FU	3251	Fuse 1A	CEK1191
		GPS unit	CWX2591
GY	572	Sensor	CSX1046
GY	573	Sensor	CSX1042
EF	1801	EMI Filter	CCG1025
EF	3001	EMI Filter	CCG1081
EF	3002	EMI Filter	CCG1081
EF	3003	EMI Filter	CCG1081
EF	3004	EMI Filter	CCG1081
EF	3005	EMI Filter	CCG1081
EF	3006	EMI Filter	CCG1081
EF	3151	EMI Filter	CCG1067
EF	3152	EMI Filter	CCG1067
EF	3251	EMI Filter	CCG1030
EF	3252	EMI Filter	CCG1030
EF	5001	EMI Filter	CCG1030

RESISTORS

R	561		RN1/16SE1001D
R	562		RN1/16SE1101D
R	563		RN1/16SE1001D
R	572		RS1/10S151J
R	573		RS1/10S105J
R	574		RS1/16S104J
R	575		RS1/16S0R0J
R	601		RS1/16S473J
R	602		RS1/16S473J
R	603		RS1/16S104J
R	605		RS1/16S104J
R	607		RS1/16S104J
R	610		RS1/16S104J
R	612		RS1/16S104J
R	613		RS1/16S473J
R	614		RS1/16S0R0J
R	615		RS1/16S104J
R	617		RS1/16S473J
R	618		RS1/16S105J
R	619		RS1/16S473J
R	620		RS1/16S473J
R	622		RS1/16S472J
R	626		RS1/16S104J
R	627		RS1/16S104J
R	628		RS1/16S472J

=====Circuit Symbol and No.		===Part Name	Part No.
R	629		RS1/16S104J
R	630		RS1/16S473J
R	631		RS1/16S102J
R	632		RS1/16S104J
R	633		RS1/16S104J
R	635		RS1/16S104J
R	637		RS1/16S102J
R	638		RS1/16S104J
R	639		RS1/16S104J
R	640		RS1/16S104J
R	641		RS1/16S104J
R	642		RS1/16S104J
R	643		RS1/16S223J
R	644		RS1/16S682J
R	645		RS1/16S104J
R	646		RS1/16S104J
R	647		RS1/16S104J
R	648		RS1/16S104J
R	649		RS1/16S473J
R	662		RS1/8S2R2J
R	663		RS1/16S102J
R	665		RS1/16S333J
R	666		RS1/16S153J
R	667		RS1/16S104J
R	668		RS1/16S104J
R	669		RS1/16S104J
R	670		RS1/16S102J
R	671		RS1/16S102J
R	672		RS1/16S102J
R	673		RS1/16S104J
R	674		RS1/16S623J
R	675		RS1/16S363J
R	679		RS1/16S753J
R	680		RS1/16S363J
R	682		RS1/10S102J
R	683		RS1/16S102J
R	684		RS1/16S103J
R	685		RS1/16S103J
R	686		RS1/10S103J
R	687		RS1/16S562J
R	688		RS1/16S473J
R	689		RS1/16S393J
R	690		RS1/16S224J
R	691		RS1/16S103J
R	692		RS1/16S0R0J
R	693		RS1/16S103J
R	694		RS1/16S0R0J
R	695		RS1/16S473J
R	696		RS1/16S104J
R	697		RS1/16S0R0J
R	698		RS1/16S333J
R	699		RS1/16S203J
R	700		RS1/16S822J
R	701		RS1/16S202J
R	702		RS1/16S564J
R	703		RS1/16S102J
R	704		RS1/16S102J
R	705		RS1/16S513J
R	706		RS1/16S513J
R	707		RS1/16S104J
R	708		RS1/16S513J
R	709		RS1/16S473J
R	710		RS1/16S563J
R	711		RS1/16S104J
R	715		RS1/16S102J

=====Circuit Symbol and No.		===Part Name	Part No.
R	716		RS1/16S102J
R	717		RS1/16S471J
R	720		RS1/10S0R0J
R	1801		RN1/10SE4701D
R	1802		RS1/10S473J
R	1803		RS1/10S102J
R	1804		RS1/4S102J
R	1805		RS1/10S224J
R	1806		RS1/10S103J
R	1807		RS1/10S103J
R	1808		RS1/8S0R0J
R	1820		RS1/4S471J
R	1821		RN1/16SE8201D
R	1822		RN1/16SE1502D
R	1823		RN1/16SE2702D
R	1824		RN1/16SE3303D
R	1825		RS1/16S332J
R	1826		RS1/16S273J
R	1827		RS1/16S273J
R	1828		RS1/16S332J
R	1841		RS1/10S103J
R	1842		RS1/10S103J
R	1843		RS1/16S102J
R	1844		RS1/16S104J
R	1850		RS1/16S101J
R	1851		RS1/16S101J
R	1852		RN1/16SE1600D
R	1853		RN1/16SE6801D
R	1854		RN1/16SE1601D
R	1855		RN1/16SE1600D
R	1856		RN1/16SE5601D
R	1857		RN1/16SE1001D
R	1858		RS1/16S332J
R	1859		RS1/16S332J
R	1860		RS1/16S154J
R	1861		RS1/16S154J
R	1862		RS1/16S184J
R	1864		RS1/16S184J
R	1866		RS1/16S100J
R	1867		RS1/16S100J
R	1868		RS1/16S100J
R	1869		RS1/16S100J
R	1951		RS1/16S223J
R	1952		RS1/4S102J
R	1953		RS1/4S102J
R	1954		RS1/16S221J
R	1955		RS1/10S271J
R	1956		RN1/10SE2702D
R	1957		RN1/10SE4701D
R	2851		RS1/8S471J
R	2852		RS1/10S620J
R	2853		RS1/10S331J
R	2854		RS1/10S331J
R	2855		RS1/10S331J
R	2856		RS1/8S331J
R	2857		RS1/10S620J
R	2858		RS1/10S103J
R	2860		RS1/10S271J
R	3001		RS1/16S222J
R	3002		RS1/16S222J
R	3003		RN1/10SE2002D
R	3004		RS1/16S473J
R	3005		RS1/16S101J
R	3006		RS1/16S103J
R	3007		RS1/16S272J

=====Circuit Symbol and No.===Part Name		Part No.	=====Circuit Symbol and No.===Part Name		Part No.
R	3008	RS1/16S272J	R	3602	RS1/16S102J
R	3009	RS1/16S101J	R	3603	RS1/16S153J
R	3010	RS1/16S301J	R	3604	RS1/16S683J
R	3014	RS1/10S620J	R	3605	RS1/16S682J
R	3015	RS1/10S750J	R	3606	RS1/16S682J
R	3016	RS1/10S750J	R	3607	RS1/16S682J
R	3017	RS1/10S750J	R	3608	RS1/16S104J
R	3018	RS1/10S750J	R	3609	RS1/16S104J
R	3024	RS1/16S105J	R	3610	RS1/16S101J
R	3025	RS1/16S0R0J	R	3611	RS1/16S102J
R	3026	RS1/16S105J	R	3770	RS1/16S0R0J
R	3027	RS1/10S750J	R	3772	RS1/16S104J
R	3028	RS1/16S105J	R	3851	RS1/16S102J
R	3029	RS1/16S910J	R	3852	RS1/16S472J
R	3030	RS1/16S910J	R	3853	RS1/16S152J
R	3031	RS1/16S910J	R	3854	RS1/16S472J
R	3151	RS1/16S473J	R	3855	RS1/16S472J
R	3152	RS1/16S104J	R	3856	RS1/16S472J
R	3153	RS1/10S102J	R	3857	RS1/16S102J
R	3154	RS1/10S102J	R	3858	RS1/16S472J
R	3156	RS1/10S102J	R	3859	RS1/16S152J
R	3158	RS1/10S102J	R	3860	RS1/16S472J
R	3206	RS1/16S102J	R	3861	RS1/16S472J
R	3207	RS1/16S102J	R	3862	RS1/16S472J
R	3208	RS1/16S102J	R	3863	RS1/16S333J
R	3209	RS1/16S102J	R	3864	RS1/16S683J
R	3217	RS1/16S102J	R	3865	RS1/16S154J
R	3218	RS1/16S102J	R	3866	RS1/16S101J
R	3220	RS1/16S0R0J	R	3867	RS1/16S333J
R	3225	RS1/16S101J	R	3868	RS1/16S683J
R	3226	RS1/16S102J	R	3869	RS1/16S473J
R	3227	RS1/16S102J	R	3870	RS1/16S473J
R	3228	RS1/16S102J	R	3871	RS1/16S105J
R	3229	RS1/16S102J	R	3872	RS1/16S105J
R	3230	RS1/16S102J	R	3873	RS1/16S154J
R	3231	RS1/16S102J	R	3874	RS1/16S101J
R	3233	RS1/16S0R0J	R	3901	RS1/16S103J
R	3234	RS1/16S104J	R	3902	RS1/16S473J
R	3235	RS1/16S104J	R	3903	RS1/16S473J
R	3238	RS1/16S104J	R	3904	RS1/16S473J
R	3240	RS1/16S104J	R	3905	RS1/16S470J
R	3241	RS1/16S104J	R	3907	RS1/16S0R0J
R	3242	RS1/16S104J	R	3908	RS1/16S473J
R	3243	RS1/16S0R0J	R	3909	RS1/16S473J
R	3250	RS1/16S102J	R	3910	RS1/16S473J
R	3251	RS1/16S0R0J	R	3911	RS1/16S470J
R	3252	RS1/16S0R0J	R	3913	RS1/16S223J
R	3253	RS1/16S0R0J	R	3914	RS1/16S203J
R	3255	RS1/16S102J	R	3915	RS1/16S471J
R	3256	RS1/16S104J	R	3916	RS1/16S471J
R	3259	RS1/16S104J	R	3917	RS1/16S471J
R	3260	RS1/16S104J	R	3918	RS1/16S104J
R	3262	RS1/16S102J	R	3919	RS1/16S473J
R	3263	RS1/16S104J	R	3920	RS1/16S473J
R	3264	RS1/16S0R0J	R	3921	RS1/16S0R0J
R	3267	RS1/16S102J	R	3926	RN1/16SE5602D
R	3268	RS1/16S104J	R	3927	RN1/16SE1802D
R	3270	RS1/16S105J	R	3928	RS1/16S103J
R	3273	RS1/16S105J	R	3951	RS1/16S104J
R	3274	RS1/16S105J	R	3952	RS1/16S104J
R	3277	RS1/16S104J	R	3953	RS1/16S104J
R	3278	RS1/16S105J	R	3954	RS1/16S104J
R	3282	RS1/16S102J	R	3956	RS1/16S104J
R	3283	RS1/16S102J	R	3958	RS1/16S563J
R	3601	RS1/16S102J	R	3959	RS1/16S563J

=====Circuit Symbol and No.===Part Name			Part No.
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R	3960		RS1/16S563J
R	3967		RS1/16S0R0J
R	3968		RS1/16S0R0J
R	3969		RS1/16S0R0J
R	3970		RS1/16S0R0J
R	3971		RS1/16S0R0J
R	3972		RS1/16S0R0J
R	3981		RS1/16S104J
R	3982		RS1/16S104J
R	3983		RS1/16S102J
R	3986		RS1/16S104J
R	3987		RS1/16S104J
R	3988		RS1/16S104J
R	3989		RS1/16S104J
R	3990		RS1/16S104J
R	3991		RS1/16S101J
R	3992		RS1/16S104J
R	3993		RS1/16S104J
R	3994		RS1/16S104J
R	3995		RS1/16S0R0J
R	3996		RS1/16S101J
R	3997		RS1/16S473J
R	3998		RS1/16S152J
R	5004		RS1/16S681J
R	5006		RS1/16S681J
R	5007		RS1/16S681J
R	5008		RS1/16S681J
R	5009		RS1/16S101J
R	5010		RS1/16S101J
R	5011		RS1/16S101J
R	5012		RS1/16S101J
R	5015		RS1/16S101J
R	5016		RS1/16S101J
R	5017		RS1/16S101J
R	5018		RS1/16S681J
R	5019		RS1/16S681J
R	5020		RS1/10S122J
R	5021		RS1/10S122J
R	5022		RS1/16S100J

CAPACITORS

C	571		CEV1R0M50
C	572		CKSQYF334Z25
C	573		CKSRYF104Z25
C	574		CEVQ101M10
C	575		CKSQYB105K16
C	576		CKSRYB104K16
C	577		CKSRYB104K16
C	578		CKSQYB103K25
C	579		CKSYB106K6R3
C	601		CKSRYF104Z25
C	602		CKSRYF104Z25
C	603		CKSRYF104Z25
C	604		CKSRYF104Z25
C	605		CKSRYF104Z25
C	606		CKSRYF104Z25
C	607		CKSRYF104Z25
C	608		CKSRYF104Z25
C	609		CKSRYF104Z25
C	611		CKSRYF104Z25
C	612		CKSRYF104Z25
C	613		CKSRYF104Z25
C	614		CKSRYF104Z25
C	631		CKSRYF104Z25
C	632		CKSRYF104Z25
C	634		CKSRYF104Z25

=====Circuit Symbol and No.===Part Name			Part No.
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C	635		CEV100M16
C	651		CKSRYB104K16
C	652		CKSRYB104K16
C	653		CEVQ220M16
C	654		CKSRYB474K10
C	661		CSZST330M16
C	662		CKSRYF104Z25
C	663		CKSRYF104Z25
C	664		CKSRYF104Z25
C	665		CKSRYF104Z25
C	666		CKSRYB104K16
C	667		CKSRYF104Z25
C	668		CKSRYB104K16
C	669		CKSRYB104K16
C	672		CKSRYB823K16
C	673		CKSRYB103K50
C	674		CKSRYB104K16
C	675		CKSRYB102K50
C	676		CKSRYF104Z25
C	679		CKSRYF104Z25
C	682		CKSRYF104Z25
C	684		CKSRYB473K50
C	685		CKSRYB473K50
C	686		CKSRYB473K50
C	687		CKSRYB473K50
C	1801		CKSRYB104K16
C	1803		CKSRYB104K16
C	1804		CKSRYB104K16
C	1805		CKSRYB473K50
C	1806		CKSRYB473K50
C	1807		CKSRYB104K16
C	1808		CKSRYF103Z50
C	1809		CKSRYB104K16
C	1810	10000μF/16V	CCH1412
C	1811		CKSRYB104K16
C	1831		CKSRYB103K50
C	1832		CKSRYB103K50
C	1833		CEV101M16
C	1834		CKSRYB103K50
C	1835		CKSRYB473K50
C	1836		CKSRYB103K50
C	1841		CKSRYB104K16
C	1842		CKSRYB104K16
C	1850		CKSRYB103K50
C	1851		CKSRYB153K50
C	1852		CCSRCH101J50
C	1853		CCSRCH101J50
C	1854		CKSRYB104K16
C	1855		CKSRYB104K16
C	1856		CKSRYB103K50
C	1857		CCSRCH330J50
C	1858		CKSRYB105K10
C	1859		CKSRYB103K50
C	1860		CCSRCH330J50
C	1861		CKSRYB105K10
C	1862		CKSYB475K10
C	1863		CKSYB475K10
C	1864	4.7μF	CCG1111
C	1865		CKSRYF474Z16
C	1866	4.7μF	CCG1111
C	1867		CKSRYF474Z16
C	1868	10μF	CCG1150
C	1869	10μF	CCG1150
C	1870	100μF/10V	CCH1332
C	1871	100μF/10V	CCH1332

=====Circuit Symbol and No.===Part Name			Part No.
C	1872	100μF/10V	CCH1332
C	1873		CKSRYF104Z25
C	1874		CKSRYF104Z25
C	1875	10μF	CCG1150
C	1876	10μF	CCG1150
C	1877	10μF	CCG1150
C	1878	10μF	CCG1150
C	1879	10μF	CCG1150
C	1880	10μF	CCG1150
C	1881		CKSRYB102K50
C	1951		CKSRYB474K10
C	1952		CKSQYB105K16
C	1953		CEV101M10
C	2851		CKSQYB102K50
C	2853		CKSRYB102K50
C	2854		CKSQYB104K50
C	3001		CCSRCH5R0C50
C	3002		CKSRYF104Z25
C	3003		CKSRYF104Z25
C	3004		CKSRYF104Z25
C	3006		CKSRYB104K16
C	3007		CKSRYB104K16
C	3008		CKSRYB104K16
C	3009		CKSRYF104Z25
C	3010		CEVQ470M16
C	3011		CKSRYB103K50
C	3012		CCSRCH470J50
C	3013		CCSRCH220J50
C	3014		CEV100M16
C	3015		CKSRYF104Z25
C	3016		CKSRYB103K50
C	3017		CEVQ470M16
C	3018		CEV221M4
C	3019		CEV221M4
C	3020		CEV221M4
C	3021	330μF/6.3V	CCH1410
C	3022		CEV100M10
C	3023	330μF/6.3V	CCH1410
C	3025		CEV100M10
C	3026		CKSRYB105K6R3
C	3027		CKSRYB105K6R3
C	3028		CKSRYB103K50
C	3029		CEVQ101M10
C	3031		CEV100M10
C	3032		CKSRYB105K6R3
C	3033		CKSRYB103K50
C	3034		CCSRCH680J50
C	3151		CKSRYB102K50
C	3152		CKSRYB102K50
C	3153		CKSRYB102K50
C	3154		CCSRCH101J50
C	3155		CCSRCH101J50
C	3156		CKSRYB102K50
C	3157		CKSRYB104K16
C	3158		CKSRYB104K16
C	3159		CKSRYB102K50
C	3160		CKSRYB102K50
C	3251		CEV101M10
C	3252		CKSRYF105Z10
C	3253		CEV220M10
C	3254		CKSRYF105Z10
C	3256		CKSRYB105K6R3
C	3258		CKSRYF105Z10
C	3259		CEVQ101M10
C	3260		CKSRYF104Z25
C	3261		CEVQ101M10
C	3601		CEVQ220M16
C	3602		CKSRYB473K50
C	3603		CKSRYF104Z25
C	3604		CEVQ220M16
C	3605		CKSRYB184K10
C	3606		CKSRYB473K50
C	3607		CKSRYB224K16
C	3608		CEV100M16
C	3609		CKSRYF104Z25
C	3610		CEV220M16
C	3611		CKSRYB103K50
C	3612		CSZSR100M16
C	3753		CKSRYB104K16
C	3754		CKSRYB104K16
C	3851		CKSRYF104Z25
C	3852		CKSRYB471K50
C	3853		CCSRCH680J50
C	3854		CKSRYF105Z10
C	3855		CKSRYB471K50
C	3856		CEV100M16
C	3857		CKSRYB105K10
C	3858		CKSRYB474K10
C	3859		CKSRYB105K10
C	3860		CKSRYB474K10
C	3861		CCSRCH680J50
C	3862		CKSRYF105Z10
C	3901		CEV100M16
C	3902		CCSRCH151J50
C	3903		CCSRCH330J50
C	3904		CCSRCH151J50
C	3905		CCSRCH330J50
C	3907		CKSRYF104Z25
C	3909		CEVNP100M16
C	3910		CEVNP100M16
C	3911		CKSRYF104Z25
C	3912		CKSRYB105K6R3
C	3913		CEV100M16
C	3914		CEV100M16
C	3915		CKSRYF104Z25
C	3918		CKSRYB105K10
C	3920		CSZSR100M16
C	3926		CKSRYF105Z10
C	3927		CKSRYB105K6R3
C	3928		CEV1R0M50
C	3929		CKSRYF104Z25
C	3930		CKSRYB105K10
C	3931		CEVQ101M10
C	3932		CKSRYB103K50
C	3933		CKSRYF104Z25
C	3951		CKSRYB561K50
C	3952		CKSRYB105K6R3
C	3953		CKSRYB391K50
C	3954		CKSRYB102K50
C	3955		CKSRYF104Z25
C	3956		CKSRYB105K6R3
C	3958		CKSRYB105K6R3
C	3959		CKSRYB221K50
C	3960		CKSRYB561K50
C	3962		CEV220M16
C	3963		CCSRCH121J50
C	3964		CEVNP2R2M35
C	3965		CEVNP2R2M35
C	3971		CKSRYB391K50
C	3972		CKSRYB471K50

=====Circuit Symbol and No.===Part Name			Part No.
C	3973		CCSRCH121J50
C	3974		CCSRCH820J50
C	3975		CKSRYB102K50
C	3976		CEV220M16
C	3977		CKSRYF104Z25
C	3978		CKSRYB105K10
C	3980		CKSRYB105K10
C	5001		CKSRYB105K6R3
C	5002		CEV1R0M50
C	5003		CEV1R0M50
C	5004		CEV1R0M50
C	5005		CEV1R0M50
C	5006		CEV1R0M50
C	5008		CKSRYB102K50
C	5010		CKSRYB102K50
C	5011		CKSRYB102K50
C	5012		CKSRYB102K50
C	5013		CKSRYB102K50
C	5014		CKSRYB102K50
C	5015		CEV330M6R3
C	5022		CKSRYB105K6R3
C	5023		CKSRYB103K25
C	5025		CEV100M16
C	5026		CKSRYB473K16
C	5027		CEV220M6R3
C	5028		CKSRYB473K16
C	5029		CKSRYB103K50

G Unit Number : CWX2453
Unit Name : DVD Core Unit V

MISCELLANEOUS

=====Circuit Symbol and No.===Part Name			Part No.
IC	1100	IC	AN8702FH
IC	1101	IC	NJM2904M
IC	1200	IC	MN677061ZYUB
IC	1300	IC	BA5985FM
IC	1400	IC	MNZS25BDAUB
IC	1401	IC	TC74LCX245FT
IC	1403	IC	TC74LCX244FT
IC	1404	IC	TC74LCX244FT
IC	1405	IC	TC7SH04FU
IC	1500	IC	MSM56V16160F8TKFM
IC	1501	IC	MSM56V16160F8TKFM
IC	1502	IC	MN677532JAUB
IC	1503	IC	TC74VCX74FT
IC	1504	IC	TC74VCX04FT
IC	1506	IC	SM8703AV
IC	1509	IC	TC74VCX74FT
IC	1601	IC	AK4380VT
IC	1700	IC	PE5277B
IC	1701	IC	M5M5V216ATP-70HI
IC	1702	IC	PD6354B
IC	1704	IC	TC74VCX08FT
IC	1705	IC	TC7SH04FU
IC	1706	IC	TC7SH32FU
IC	1801	IC	BA05SFP
IC	1802	IC	BA033SFP
IC	1803	IC	BA18BC0WFP
IC	1804	IC	BA00BC0WFP
Q	1102	Transistor	2SD601A
Q	1104	Transistor	2SB1260
Q	1105	Transistor	2SB709A
Q	1107	Transistor	UN2211
Q	1108	Transistor	2SB1260
Q	1109	Chip Transistor	2SC2712
Q	1110	Chip Transistor	2SC2712
Q	1111	Chip Transistor	2SC2712
Q	1600	Transistor	2SA1037K
Q	1601	Transistor	2SA1037K
Q	1602	Transistor	FMG12
Q	1603	Transistor	IMD2A
Q	1700	Transistor	DTA123JK
D	1100	Diode	1SS355
D	1101	Diode	1SS355
D	1401	Diode	UDZ2R7(B)
D	1601	Chip Diode	MA151WA
D	1800	Diode	S2G-6600
D	1801	Diode	S2G-6600
D	1802	Diode	S2G-6600
D	1803	Diode	S2G-6600
D	1804	Diode	1SR154-400
L	1201	Inductor	CTF1409
L	1202	Inductor	CTF1409
L	1401	Inductor	CTF1409
L	1402	Inductor	CTF1409
L	1403	Inductor	CTF1395
L	1404	Inductor	CTF1473
L	1500	Inductor	CTF1395
L	1501	Inductor	CTF1394
L	1502	Inductor	CTF1409
L	1503	Inductor	CTF1399
L	1504	Inductor	CTF1399
L	1505	Inductor	CTF1399
L	1506	Inductor	CTF1409
L	1507	Inductor	CTF1473
L	1508	Inductor	CTF1473
L	1509	Inductor	CTF1473
L	1512	Inductor	CTF1470
L	1600	Inductor	CTF1473
L	1602	Inductor	CTF1399
L	1700	Inductor	CTF1395
L	1701	Inductor	CTF1409
L	1702	Inductor	CTF1473
L	1704	Inductor	CTF1473
L	1720	Inductor	CTF1473
L	1732	Inductor	CTF1547
L	1759	Inductor	CTF1547
L	1760	Inductor	CTF1547
X	1500	Radiator 27MHz	CSS1531
X	1700	Ceramic Resonator 4.97MHz	CSS1575
S	1301	Spring Switch(CLAMP)	CSN1051
S	1302	Spring Switch(L/E ON/OFF)	CSN1051
S	1303	Spring Switch(8cm DETECT)	CSN1051
S	1304	Spring Switch(12cm DETECT)	CSN1051
VR	1500	Semi-fixed 2.2kΩ(B)	CCP1177
F	1600	Filter	CTF1515

RESISTORS

=====Circuit Symbol and No.===Part Name			Part No.
R	1101		RS1/16SS330J
R	1102		RS1/16SS3R9J
R	1103		RS1/16SS330J
R	1104		RS1/16SS3R9J
R	1105		RS1/16SS122J
R	1106		RS1/16SS472J
R	1107		RS1/16S6201D
R	1108		RS1/16SS3R9J
R	1109		RS1/16SS3R9J
R	1110		RS1/16S1002D
R	1113		RS1/16S2402D
R	1114		RS1/16SS823J
R	1115		RS1/16SS682J
R	1116		RS1/16SS3R9J
R	1117		RS1/16SS3R9J

=====Circuit Symbol and No.===Part Name		Part No.	=====Circuit Symbol and No.===Part Name		Part No.
R	1118	RS1/16SS223J	R	1233	RS1/16SS273J
R	1119	RS1/16SS202J	R	1234	RS1/16SS183J
R	1120	RS1/16SS105J	R	1235	RS1/16SS102J
R	1121	RS1/16SS105J	R	1242	RAB4CQ221J
R	1122	RS1/16SS103J	R	1245	RS1/16SS562J
R	1123	RS1/16SS103J	R	1246	RS1/16SS242J
R	1124	RS1/16SS103J	R	1251	RS1/16SS473J
R	1125	RS1/16SS103J	R	1255	RS1/16SS0R0J
R	1126	RS1/16SS103J	R	1257	RS1/16S221J
R	1127	RS1/16SS103J	R	1258	RS1/16SS221J
R	1128	RS1/16SS3R9J	R	1259	RS1/16SS221J
R	1129	RS1/16SS3R9J	R	1260	RS1/16SS221J
R	1130	RS1/16SS102J	R	1261	RS1/16SS221J
R	1131	RS1/16SS102J	R	1262	RS1/16SS273J
R	1132	RS1/16SS102J	R	1263	RS1/16SS273J
R	1133	RS1/16SS102J	R	1264	RS1/16SS104J
R	1134	RS1/16SS102J	R	1301	RS1/16S3902D
R	1135	RAB4CQ0R0J	R	1302	RS1/16S3902D
R	1136	RS1/16SS133J	R	1303	RS1/16S3002D
R	1137	RS1/16SS133J	R	1304	RS1/16S3902D
R	1138	RS1/16SS0R0J	R	1305	RS1/16SS221J
R	1139	RS1/16SS0R0J	R	1306	RS1/16SS0R0J
R	1140	RS1/16SS0R0J	R	1307	RS1/16SS221J
R	1141	RS1/16SS0R0J	R	1308	RS1/16S3002D
R	1142	RS1/16SS183J	R	1310	RS1/16SS102J
R	1143	RS1/16SS273J	R	1311	RS1/16S3902D
R	1144	RS1/16SS273J	R	1312	RS1/16S0R0J
R	1145	RS1/16SS0R0J	R	1314	RS1/16SS221J
R	1146	RS1/16SS0R0J	R	1321	RS1/16SS221J
R	1147	RS1/16SS0R0J	R	1323	RS1/16SS104J
R	1148	RS1/16SS0R0J	R	1324	RS1/16SS473J
R	1149	RS1/16SS102J	R	1325	RS1/16SS273J
R	1150	RS1/16SS102J	R	1400	RAB4CQ681J
R	1151	RS1/16SS102J	R	1401	RAB4CQ681J
R	1152	RS1/16SS154J	R	1402	RAB4CQ103J
R	1153	RS1/16SS154J	R	1403	RS1/16SS222J
R	1154	RS1/16SS154J	R	1404	RAB4CQ820J
R	1156	RS1/16SS224J	R	1405	RS1/16SS221J
R	1157	RS1/16SS0R0J	R	1406	RS1/16SS103J
R	1201	RS1/16SS203J	R	1407	RAB4CQ220J
R	1202	RS1/16SS102J	R	1408	RAB4CQ220J
R	1203	RS1/16SS471J	R	1409	RS1/16SS103J
R	1204	RS1/16SS221J	R	1410	RAB4CQ220J
R	1205	RS1/16SS221J	R	1411	RAB4CQ220J
R	1206	RS1/16SS473J	R	1412	RAB4CQ0R0J
R	1207	RS1/16SS101J	R	1413	RS1/16SS681J
R	1208	RS1/16SS101J	R	1414	RS1/16SS820J
R	1209	RS1/16SS473J	R	1415	RS1/16SS100J
R	1210	RS1/16SS222J	R	1416	RS1/16SS681J
R	1212	RS1/16SS473J	R	1417	RS1/16SS103J
R	1213	RS1/16SS101J	R	1418	RS1/16SS681J
R	1215	RS1/16SS123J	R	1419	RS1/16SS103J
R	1216	RS1/16SS473J	R	1420	RS1/16SS103J
R	1219	RS1/16SS123J	R	1421	RS1/16SS820J
R	1220	RS1/16SS105J	R	1422	RS1/16SS820J
R	1221	RS1/16SS562J	R	1423	RS1/16SS103J
R	1222	RS1/16SS273J	R	1424	RS1/16SS220J
R	1223	RS1/16SS273J	R	1425	RS1/16SS104J
R	1226	RS1/16SS153J	R	1426	RS1/16SS103J
R	1227	RS1/16SS123J	R	1429	RS1/16S470J
R	1228	RS1/16SS472J	R	1430	RS1/16SS101J
R	1229	RS1/16SS472J	R	1431	RS1/16SS103J
R	1230	RS1/16SS472J	R	1434	RS1/16SS681J
R	1231	RS1/16SS273J	R	1436	RS1/16SS103J
R	1232	RS1/16S6801D	R	1437	RS1/16SS103J

=====Circuit Symbol and No.===Part Name			Part No.
R	1438		RS1/16SS221J
R	1439		RAB4CQ0R0J
R	1440		RAB4CQ0R0J
R	1441		RS1/16SS0R0J
R	1442		RS1/16SS221J
R	1443		RS1/16SS221J
R	1500		RS1/16SS560J
R	1501		RS1/16SS560J
R	1502		RS1/16SS560J
R	1503		RS1/16SS560J
R	1504		RS1/16SS560J
R	1505		RS1/16SS560J
R	1506		RS1/16SS560J
R	1507		RS1/16SS560J
R	1508		RS1/16SS560J
R	1509		RS1/16SS560J
R	1510		RS1/16SS560J
R	1511		RS1/16SS560J
R	1513		RS1/16SS750J
R	1514		RS1/16SS622J
R	1515		RS1/16SS162J
R	1516		RS1/16SS182J
R	1517		RS1/16SS201J
R	1518		RS1/16SS201J
R	1519		RS1/16S101J
R	1520		RS1/16S101J
R	1521		RS1/16S101J
R	1523		RS1/16SS221J
R	1524		RS1/16S470J
R	1527		RS1/16SS103J
R	1529		RS1/16SS104J
R	1534		RS1/16SS221J
R	1535		RS1/16SS101J
R	1537		RS1/16SS391J
R	1538		RS1/16SS391J
R	1539		RAB4CQ391J
R	1540		RAB4CQ391J
R	1541		RAB4CQ391J
R	1542		RAB4CQ391J
R	1543		RAB4CQ391J
R	1544		RAB4CQ391J
R	1545		RAB4CQ391J
R	1546		RS1/16SS103J
R	1548		RS1/16SS103J
R	1549		RS1/16SS560J
R	1550		RS1/16SS560J
R	1551		RS1/16SS560J
R	1552		RS1/16SS560J
R	1553		RS1/16SS560J
R	1554		RS1/16SS560J
R	1555		RS1/16SS560J
R	1556		RS1/16SS560J
R	1557		RS1/16SS560J
R	1558		RS1/16SS560J
R	1559		RS1/16SS560J
R	1560		RS1/16SS560J
R	1561		RS1/16SS560J
R	1562		RS1/16SS560J
R	1563		RS1/16SS560J
R	1564		RS1/16SS560J
R	1565		RS1/16SS560J
R	1566		RS1/16S101J
R	1567		RS1/16SS560J
R	1568		RS1/16SS560J
R	1569		RS1/16SS560J

=====Circuit Symbol and No.===Part Name			Part No.
R	1570		RS1/16SS560J
R	1571		RS1/16SS560J
R	1572		RS1/16SS560J
R	1573		RS1/16SS560J
R	1574		RS1/16SS560J
R	1575		RS1/16SS560J
R	1577		RS1/16S0R0J
R	1579		RS1/16S0R0J
R	1600		RS1/16SS271J
R	1601		RS1/16SS152J
R	1602		RS1/16SS101J
R	1604		RS1/16S3300D
R	1605		RS1/16SS122J
R	1606		RS1/16SS0R0J
R	1623		RS1/16SS102J
R	1624		RS1/16SS102J
R	1625		RS1/16SS223J
R	1626		RS1/16SS223J
R	1628		RS1/16S68R0D
R	1634		RS1/16SS472J
R	1635		RS1/16SS472J
R	1636		RS1/16SS472J
R	1637		RS1/16SS472J
R	1701		RN1/16SE1502D
R	1702		RS1/16SS221J
R	1703		RS1/16SS221J
R	1704		RS1/16SS104J
R	1705		RS1/16SS103J
R	1706		RS1/16SS103J
R	1707		RS1/16SS221J
R	1708		RS1/16SS0R0J
R	1709		RS1/16SS221J
R	1710		RS1/16SS473J
R	1711		RS1/16SS330J
R	1712		RS1/16SS0R0J
R	1713		RS1/16SS104J
R	1714		RS1/16SS104J
R	1715		RS1/16SS472J
R	1716		RS1/16SS104J
R	1717		RS1/16SS473J
R	1718		RS1/16SS104J
R	1719		RS1/16SS104J
R	1720		RS1/16SS473J
R	1721		RS1/16SS104J
R	1722		RS1/16SS104J
R	1723		RS1/16SS473J
R	1724		RS1/16SS221J
R	1725		RS1/16S0R0J
R	1726		RS1/16SS104J
R	1727		RS1/16SS103J
R	1728		RS1/16SS104J
R	1729		RS1/16SS104J
R	1730		RS1/16SS473J
R	1733		RS1/16SS104J
R	1734		RS1/16SS104J
R	1735		RS1/16SS222J
R	1736		RS1/16SS221J
R	1737		RS1/16SS221J
R	1738		RS1/16SS104J
R	1739		RS1/16SS103J
R	1740		RS1/16SS103J
R	1741		RS1/16SS221J
R	1742		RS1/16SS104J
R	1743		RS1/16SS221J
R	1744		RS1/16SS221J

=====Circuit Symbol and No.===Part Name	Part No.
R 1745	RS1/16SS221J
R 1746	RS1/16SS221J
R 1747	RS1/16SS222J
R 1748	RS1/16SS473J
R 1749	RS1/16SS104J
R 1750	RS1/16SS472J
R 1751	RS1/16SS103J
R 1752	RS1/16SS104J
R 1753	RS1/16SS104J
R 1754	RS1/16SS104J
R 1755	RS1/16SS104J
R 1756	RS1/16SS473J
R 1757	RS1/16SS472J
R 1758	RS1/16SS104J
R 1762	RS1/16SS104J
R 1763	RS1/16SS104J
R 1764	RS1/16SS104J
R 1766	RS1/16SS104J
R 1771	RS1/16SS104J
R 1772	RS1/16SS104J
R 1773	RS1/16SS104J
R 1774	RS1/16SS473J
R 1775	RS1/16SS221J
R 1776	RS1/16SS104J
R 1777	RS1/16SS104J
R 1778	RS1/16SS0R0J
R 1801	RS1/16S3902D
R 1802	RS1/16S3302D
R 1808	RS1/16SS102J
R 1809	RS1/16SS102J

CAPACITORS

=====Circuit Symbol and No.===Part Name	Part No.
C 1100	CKSRYB105K10
C 1101	CKSRYB473K25
C 1102	CKSSYB103K16
C 1103	CSZSR101M6R3
C 1104	CKSSYB104K10
C 1105	CKSSYB104K10
C 1106	CKSRYB473K25
C 1107	CKSSYB103K16
C 1108	CSZSR101M6R3
C 1109	CKSSYB104K10
C 1110	CKSRYB154K10
C 1111	CCSSCH221J25
C 1114	CCSSCH330J50
C 1115	CKSSYB104K10
C 1116	CCSSCH221J25
C 1117	CKSRYB105K10
C 1118	CKSSYB104K10
C 1119	CKSSYB104K10
C 1120	CKSSYB104K10
C 1121	CKSSYB104K10
C 1122	CSZSC470M16
C 1123	CKSRYB273K25
C 1124	CKSSYB104K10
C 1125	CKSSYB104K10
C 1126	CKSSYB473K10
C 1127	CCSRCH561J50
C 1128	CKSSYB104K10
C 1129	CKSSYB104K10
C 1130	CCSRCH102J50
C 1131	CCSSCH120J50
C 1133	CCSRCH561J50
C 1134	CKSSYB104K10
C 1136	CCSSCH101J50
C 1137	CCSSCH101J50
C 1138	CCSSCH101J50
C 1139	CKSSYB104K10
C 1140	CKSSYB103K16
C 1141	CKSSYB104K10
C 1142	CKSSYB104K10
C 1143	CKSSYB473K10
C 1144	CKSSYB473K10
C 1145	CKSSYB103K16
C 1146	CKSSYB473K10
C 1148	CKSSYB103K16
C 1201	CKSRYB105K10
C 1202	CCSSCH101J50
C 1203	CKSRYB474K10
C 1204	CCSRCH561J50
C 1205	CCSRCH331J50
C 1206	CKSRYB105K10
C 1207	CKSSYB104K10
C 1208	CCSRCH471J50
C 1209	CCSRCH391J50
C 1210	CKSRYB105K10
C 1211	CCSSCH101J50
C 1212	CKSSYB104K10
C 1213	CKSRYB474K10
C 1214	CCSRCH102J50
C 1215	CCSRCH102J50
C 1216	CKSSYB562K25
C 1217	CCSRCH102J50
C 1218	CKSSYB104K10
C 1219	CKSSYB104K10
C 1220	CKSRYB474K10
C 1221	CCSSCH470J50
C 1222	CKSRYB183K25
C 1223	CCSRCH102J50
C 1224	CKSSYB104K10
C 1225	CKSSYB104K10
C 1227	CKSSYB103K16
C 1228	CKSSYB104K10
C 1229	CCSRCH102J50
C 1230	CKSSYB103K16
C 1231	CKSSYB104K10
C 1232	CKSRYB154K10
C 1233	CKSSYB104K10
C 1234	CKSSYB104K10
C 1235	CKSSYB104K10
C 1236	CKSSYB471K50
C 1241	CKSSYB103K16
C 1242	CKSSYB103K16
C 1243	CKSSYB104K10
C 1300	CKSSYB103K16
C 1301	CKSSYB103K16
C 1304	CKSRYB104K16
C 1305	CEV101M16
C 1308	CKSSYB104K10
C 1400	CKSSYB104K10
C 1401	CKSSYB104K10
C 1402	CKSSYB104K10
C 1403	CKSSYB104K10
C 1404	CKSSYB104K10
C 1405	CKSSYB104K10
C 1406	CKSSYB104K10
C 1407	CKSSYB104K10
C 1408	CKSSYB104K10
C 1409	CKSSYB104K10
C 1410	CKSSYB104K10
C 1411	CKSSYB104K10
C 1412	CKSSYB104K10

=====Circuit Symbol and No.===Part Name			Part No.
C	1413		CKSSYB104K10
C	1414		CKSRYB105K10
C	1415		CKSSYB104K10
C	1416		CKSSYB104K10
C	1417		CCSSCH181J25
C	1418		CKSSYB471K50
C	1419		CKSSYB104K10
C	1421		CKSSYB104K10
C	1422		CKSSYB104K10
C	1423		CKSSYB104K10
C	1500		CKSSYB104K10
C	1501		CKSSYB224K6R3
C	1502		CKSSYB104K10
C	1503		CKSSYB224K6R3
C	1504		CKSSYB224K6R3
C	1505		CKSSYB224K6R3
C	1506		CSZSC101M10
C	1507		CKSSYB104K10
C	1508		CKSSYB104K10
C	1509		CKSSYB224K6R3
C	1510		CKSSYB224K6R3
C	1511		CKSSYB104K10
C	1512		CKSSYB104K10
C	1513		CKSSYB104K10
C	1514		CKSSYB104K10
C	1515		CKSSYB104K10
C	1516		CKSSYB104K10
C	1517		CKSSYB104K10
C	1518		CKSSYB104K10
C	1519		CKSSYB104K10
C	1520		CKSSYB104K10
C	1521		CKSSYB104K10
C	1522		CKSSYB104K10
C	1523		CKSSYB104K10
C	1524		CKSSYB104K10
C	1525		CKSSYB104K10
C	1526		CKSSYB104K10
C	1527		CKSSYB104K10
C	1528		CKSSYB104K10
C	1529		CKSSYB471K50
C	1530		CKSSYB104K10
C	1532		CKSSYB104K10
C	1534		CCSSCH150J50
C	1535		CKSSYB104K10
C	1536		CKSSYB104K10
C	1537		CCSSCH150J50
C	1538		CKSSYB104K10
C	1539		CKSSYB104K10
C	1540		CKSRYB105K10
C	1541		CKSRYB105K10
C	1542		CKSSYB104K10
C	1543		CKSSYB104K10
C	1544		CKSSYB104K10
C	1545		CKSSYB104K10
C	1546		CKSSYB104K10
C	1547		CKSSYB104K10
C	1548		CKSSYB104K10
C	1549		CKSSYB104K10
C	1550		CKSSYB104K10
C	1551		CKSSYB104K10
C	1552		CKSSYB104K10
C	1553		CKSSYB104K10
C	1554		CKSSYB104K10
C	1555		CKSSYB104K10
C	1556		CKSSYB104K10

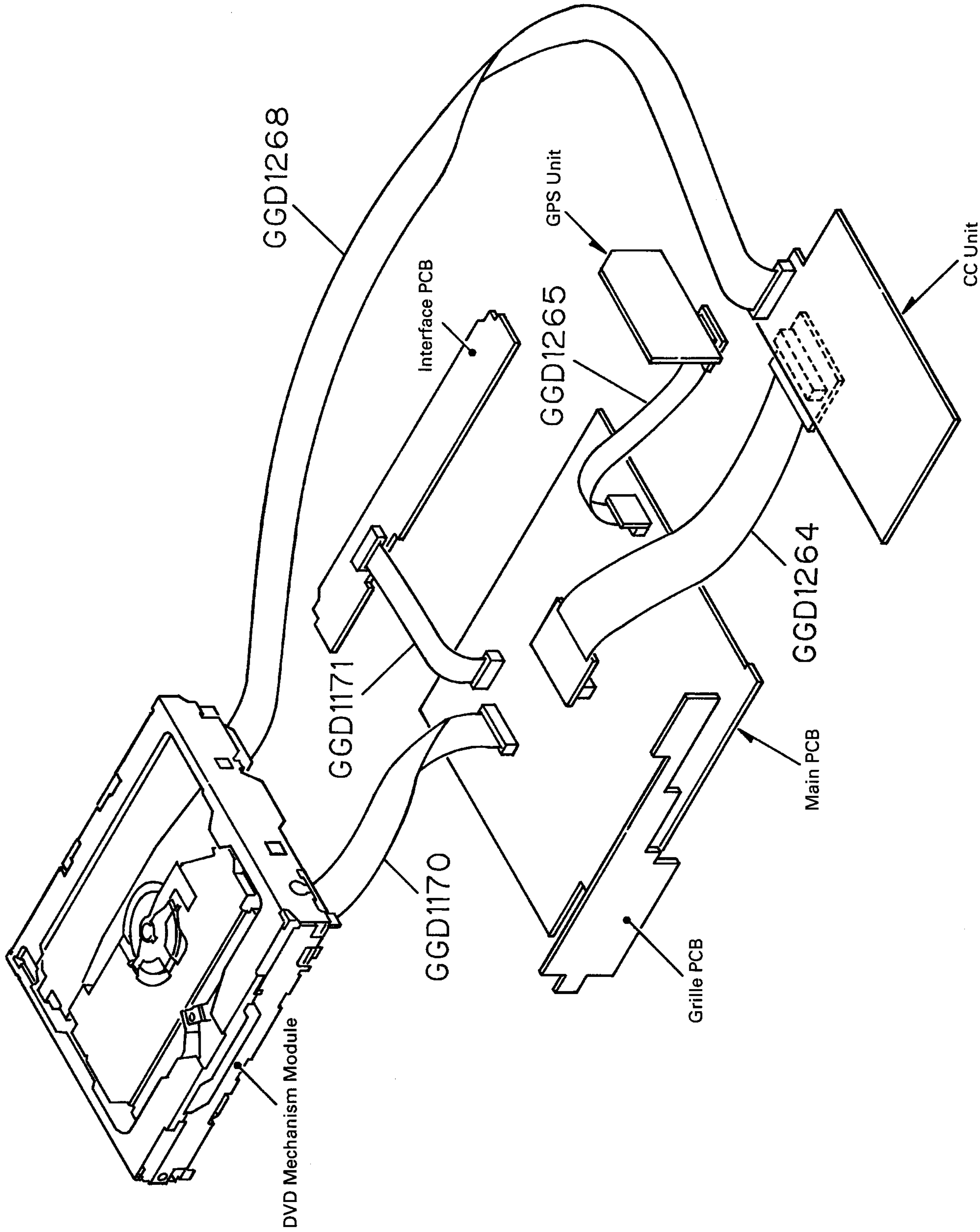
=====Circuit Symbol and No.===Part Name			Part No.
C	1570		CSZSR101M6R3
C	1571		CSZSR101M6R3
C	1572		CEV101M10
C	1573		CEV101M10
C	1574		CSZSC470M10
C	1575		CSZSC470M10
C	1576		CKSSYB104K10
C	1577		CKSSYB104K10
C	1578		CKSSYB104K10
C	1579		CKSSYB104K10
C	1600		CKSRYB104K16
C	1601		CSZSR4R7M16
C	1602		CKSSYB102K50
C	1608		CSZSR4R7M16
C	1609		CSZSR4R7M16
C	1634	10μF/10V	CCH1349
C	1635	10μF/10V	CCH1349
C	1636		CKSSYB104K10
C	1637		CKSSYB104K10
C	1700		CKSSYB104K10
C	1701		CKSSYB104K10
C	1702		CKSRYB105K10
C	1703		CKSRYB105K10
C	1704		CKSSYB104K10
C	1705		CKSRYB105K10
C	1706		CKSSYB104K10
C	1707		CKSRYB105K10
C	1708		CKSSYB104K10
C	1709		CKSSYB104K10
C	1710		CKSSYB104K10
C	1711		CKSSYB104K10
C	1712		CKSSYB103K16
C	1713		CKSSYB104K10
C	1714		CKSYB106K6R3
C	1715		CKSSYB104K10
C	1716		CKSSYB104K10
C	1717		CKSSYB104K10
C	1719		CKSSYB471K50
C	1720		CKSSYB103K16
C	1721		CKSSYB104K10
C	1722		CKSSYB103K16
C	1800		CKSRYB474K10
C	1801		CKSRYB474K10
C	1802		CKSRYB474K10
C	1803		CKSRYB474K10
C	1804	22μF/6.3V	CCH1300
C	1805	22μF/6.3V	CCH1300
C	1808		CSZSC101M10
C	1809		CCSRCH102J50
C	1810		CCSRCH102J50
C	1811		CSZSR101M6R3
C	1812		CSZSC101M10

Miscellaneous Parts List

		Pickup Unit(Service)(DP4)	CXX1530
M	1	Motor Unit(LOADING)	CXB5960
M	2	Motor Unit(CARRIAGE)	CXB5955
M	3	Motor(SPINDLE)	CXB6218
		Fan Motor	CXM1192

6. ADJUSTMENT

6.1 JIG CONNECTION DIAGRAM


GGD1268
GPS Unit
CC Unit
Interface PCB
GGD1265
GGD1264
GGD1171
Main PCB
GGD1170
Grille PCB
DVD Mechanism Module

6.2 DVD ADJUSTMENT

Cautions for servicing

This product uses 5V and 3.3V as standard voltages. The electrical potential that is the reference for signals, is not GND, but VREF (approximately 2.2V) and VHALF (approximately 1.65V).
During product adjustments, if the reference voltage is mistakenly taken as GND, and a grounding contact is made, not only would it be impossible to measure the accurate electrical potential, but also the servo motor would malfunction, resulting in the application of a strong impact on the pick up. The following precautionary measures should be strictly adhered to, in order to avoid such problems.
The reference voltage and GND should not be confused when using the minus probe of a measurement device. When an oscilloscope is being used special care should be taken to make sure that the reference voltage is not connected to the probe of ch1 (on the minus side), while the probe of ch2 (on the minus side), is connected to GND. Further, since the body frame of most measurement devices have the same electrical potential as the minus side of the probe, the body frame of the measurement device should be set to floating ground.

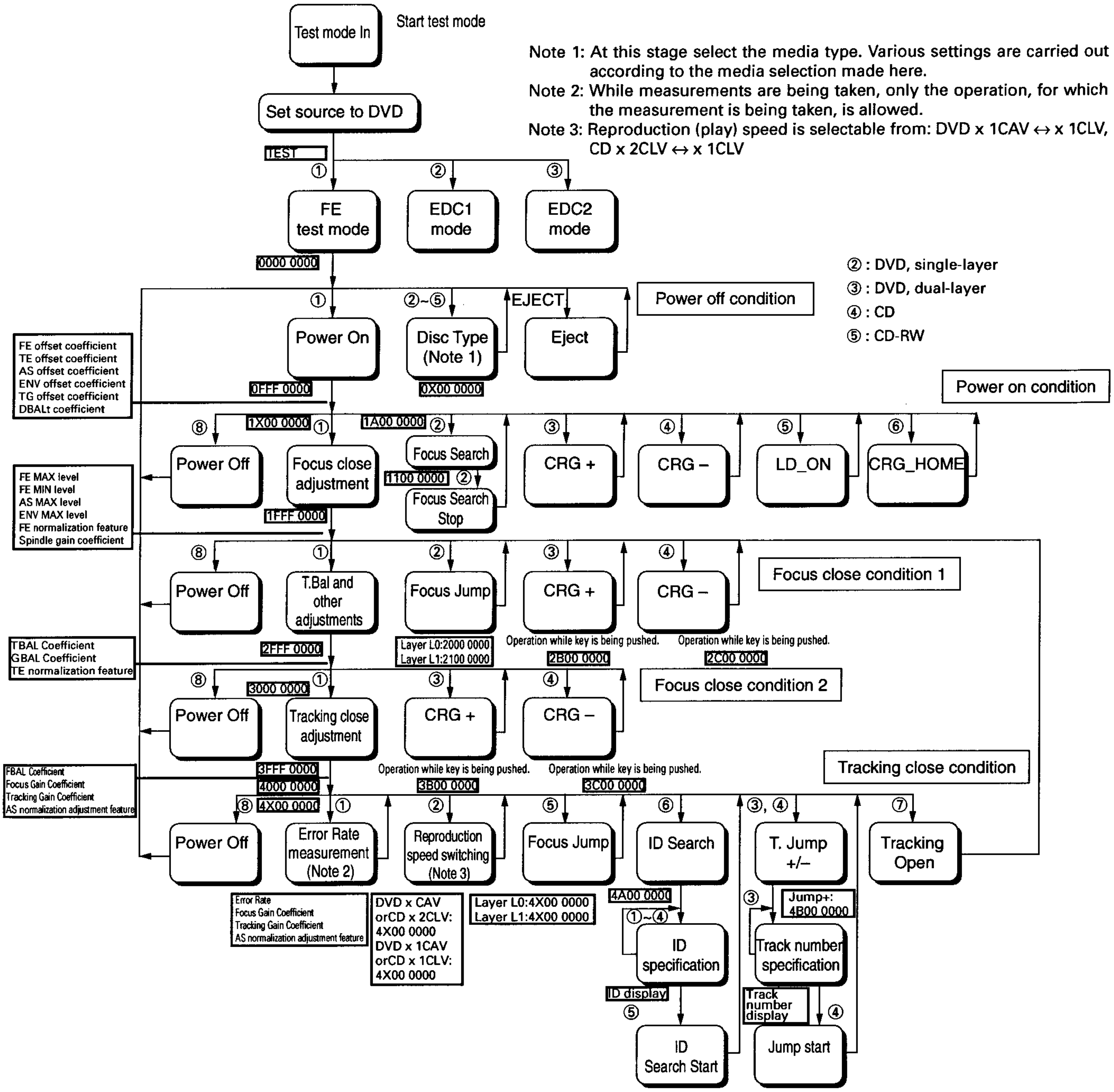
If the reference voltage is connected to GND by mistake, turn the regulator OFF immediately, or turn the power OFF.

- Remove the filters and wires used for measurements only after the regulator has been turned OFF.
- After the power supply is turned on, regulator ON the following adjustment and measurement are promptly done.
- Whenever the product is in the test mode, the software will not take any protective action. For this reason, special care should be taken to make sure that no mechanical or electrical shock could be applied to the product when taking measurements in the test mode.
- Whenever the EJECT key is pressed to eject the disk, no other keys, other than the EJECT key, should be pressed until the disk eject action has been completed.
- Press the EJECT key only after the disk has stopped completely.
- If the product hangs up turn the power OFF immediately.
- Laser didoes may be damaged, if the volume switch for the laser power adjustment of the pick up unit, is turned.

- Test mode starting procedure
  The test mode can be selected from the navigation test mode.

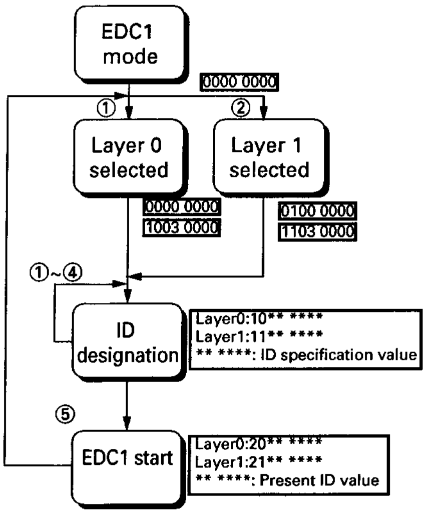
Please use the " remote control unit of the product accessory" after the test mode starts.

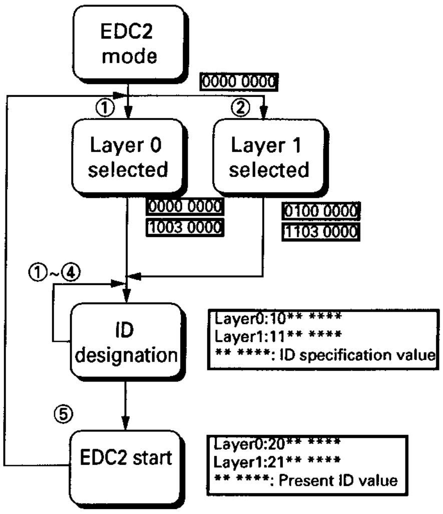
● Front-End test mode flow chart



Note 1: At this stage select the media type. Various settings are carried out according to the media selection made here.
Note 2: While measurements are being taken, only the operation, for which the measurement is being taken, is allowed.
Note 3: Reproduction (play) speed is selectable from: DVD x 1CAV ↔ x 1CLV, CD x 2CLV ↔ x 1CLV

Test mode In
Start test mode
Set source to DVD
TEST
①
②
③
FE test mode
EDC1 mode
EDC2 mode
0000 0000
② : DVD, single-layer
③ : DVD, dual-layer
④ : CD
⑤ : CD-RW
①
②~⑤
EJECT
Power off condition
Power On
Disc Type (Note 1)
Eject
FE offset coefficient
TE offset coefficient
AS offset coefficient
ENV offset coefficient
TG offset coefficient
DBALt coefficient
0FFF 0000
0X00 0000
Power on condition
⑧
1X00 0000
①
1A00 0000
②
③
④
⑤
⑥
Power Off
Focus close adjustment
Focus Search
1100 0000
Focus Search Stop
CRG +
CRG –
LD_ON
CRG_HOME
FE MAX level
FE MIN level
AS MAX level
ENV MAX level
FE normalization feature
Spindle gain coefficient
1FFF 0000
⑧
①
②
③
④
Power Off
T.Bal and other adjustments
Focus Jump
CRG +
CRG –
Focus close condition 1
Layer L0:2000 0000
Layer L1:2100 0000
Operation while key is being pushed.
2B00 0000
Operation while key is being pushed.
2C00 0000
TBAL Coefficient
GBAL Coefficient
TE normalization feature
2FFF 0000
⑧
3000 0000
①
③
④
Focus close condition 2
Power Off
Tracking close adjustment
CRG +
CRG –
FBAL Coefficient
Focus Gain Coefficient
Tracking Gain Coefficient
AS normalization adjustment feature
3FFF 0000
4000 0000
Operation while key is being pushed.
3B00 0000
Operation while key is being pushed.
3C00 0000
Tracking close condition
⑧
4X00 0000
①
②
⑤
⑥
③, ④
⑦
Power Off
Error Rate measurement (Note 2)
Reproduction speed switching (Note 3)
Focus Jump
ID Search
T. Jump +/–
Tracking Open
Error Rate
Focus Gain Coefficient
Tracking Gain Coefficient
AS normalization adjustment feature
DVD x CAV orCD x 2CLV: 4X00 0000
DVD x 1CAV orCD x 1CLV: 4X00 0000
Layer L0:4X00 0000
Layer L1:4X00 0000
4A00 0000
①~④
③
Jump+: 4B00 0000
ID specification
Track number specification
ID display
⑤
Track number display
④
ID Search Start
Jump start


EDC1 mode
0000 0000
①
②
Layer 0 selected
Layer 1 selected
0000 0000
1003 0000
0100 0000
1103 0000
①~④
ID designation
Layer0:10** ****
Layer1:11** ****
** ****: ID specification value
⑤
EDC1 start
Layer0:20** ****
Layer1:21** ****
** ****: Present ID value


EDC2 mode
0000 0000
①
②
Layer 0 selected
Layer 1 selected
0000 0000
1003 0000
0100 0000
1103 0000
①~④
ID designation
Layer0:10** ****
Layer1:11** ****
** ****: ID specification value
⑤
EDC2 start
Layer0:20** ****
Layer1:21** ****
** ****: Present ID value

F-close and F-search cannot be executed, unless LD-ON is set.
[If F-close isn't executed within 9 seconds after LD-ON,
it switches to LD-OFF automatically. And even if F-search is executed
within 9 seconds after LD-ON, it also switches to LD-OFF.]

The track number designation is selected from the track numbers already prepared for selection.

Switching to cyclic operation is made at step ③, and the decision is finalized (entered) in step ④.

For CD: Tracks 1, 4, 10, 11 and 32.

For DVD: Tracks 1, 4, 10, 11, 32, 64 and 100.

Method for designating an ID address:

- A number of digits are determined through commands ① and ②. Numerical UP/DOWN operations are performed through commands ③ and ④. The decision is finalized (entered) with command ⑤.

OSD display

Error Code List

Error status from DVD microcomputer	Contents	Display
0X50	Mecha. error	No dislay
0X40	No disc	No dislay
0X30	The temperature is abnormal	Thermal Protection in Motion
0X20	Read error	Error-02-XX
0XE2	Non-playable disc	NON-PLAYABLE DISC
0X90	Drrerent region disc	DFFERENT REGION DISC
0XFF	Undefined error	Error-FF

Error code of read error(Part of XX)

Error Code	Contents	Display
0X99	Data cannot read	Please condirm the disc
0X80	The address cannot be found	Please condirm the disc
0X90	Focus error	Please condirm the disc
0X91	Spindle lock NG	DVD is stopping because mechanism detected abnormality
0X92	Carrige home NG	DVD is stopping because mechanism detected abnormality
0X93	FOK error	Please condirm the disc
0X94	ID/Subcode cannot be read	Please condirm the disc
0X95	High spindle rotation	Please condirm the disc
0X96	Row spindle rotation	DVD is stopping because mechanism detected abnormality
0X98	TOC cannot be found	Please condirm the disc
0X9A	AV chip error	DVD is stopping because mechanism detected abnormality
0X9B	RecaveryNG(BE)	DVD is stopping because mechanism detected abnormality

● Skew adjustment

If any of the following replacements have been performed on the system, adjustments for pick up, must be conducted:

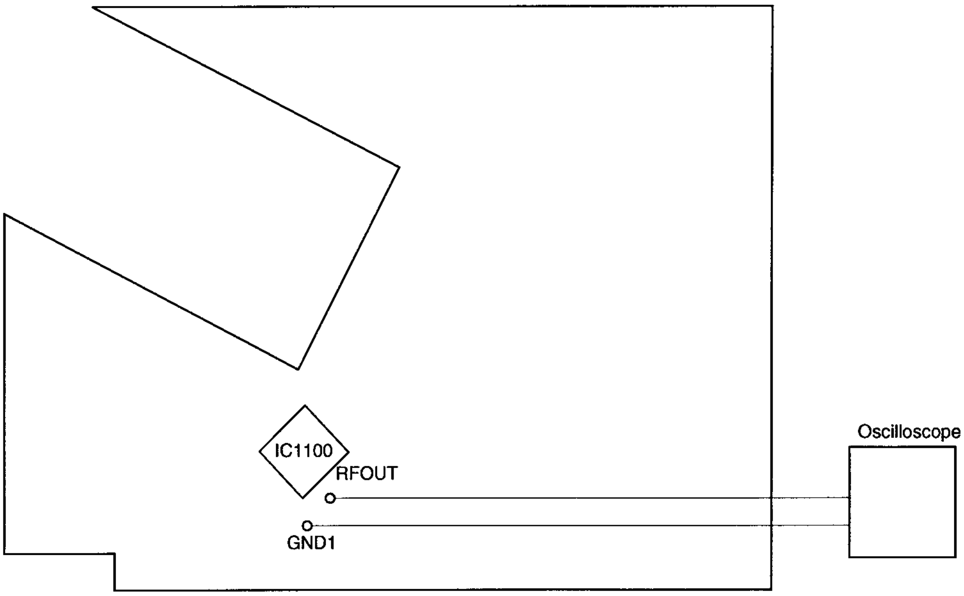
1. Pick up unit replacement
2. Spindle motor replacement
3. Carriage chassis replacement
4. Pick up unit main shaft replacement
5. Pick up unit sub-shaft replacement

Measurement device and tools : Oscilloscope
Allen key wrench
40-pin flexible extension
Adhesive material(GEM1033)
Screw rock(GYL1001)

Disk used : GGV1018
Measurement reference : GND1
Measurement point : RFOUT

Skew adjustment connection diagram

• DVD Core Unit V



Symptoms that can occur if proper adjustments are not made: Error rate reaches 10^{-3}(10^{-4} or less under normal conditions).
The RF jitter becomes more pronounced - the RF waveform becomes deformed.
Retraction of the tracking and the servo motor, become unstable.
Cautions for performing adjustments: Do not look directly into the laser beam for any prolonged periods of time.
Procedure:

1. Replace the cable, connecting the product's main unit and the DVD mechanical module, with a 40-pin extended flexible cable (GGD1170), and turn the DVD mechanical module upside down, in order to proceed with pick-up unit adjustments.
2. Remove adhesive materials from the pick-up unit, using tweezers.

(Note) Make sure that adhesive material fragments are not scattered while removing the adhesive from the unit. Be also very careful not to exert excessive force on the actuator.

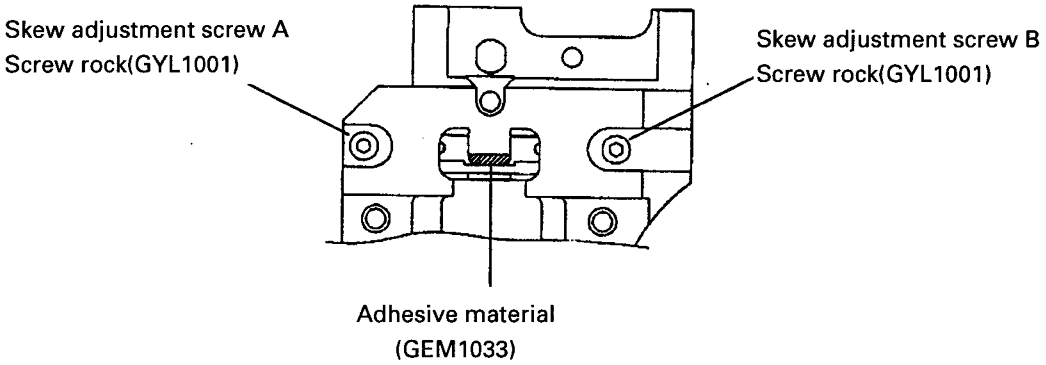
3. Connect the unit to an oscilloscope, referring to the connection diagram.
4. Turn the product power ON, and load the disk for adjustments (GGV1018).
5. Set the disk type to single-layer DVD in the front-end test mode, turn the power ON and then move the pick-up to the middle radius.
6. LD ON.
7. Close in the focus(Do not carry out 'T.Bal adjustment' and 'Tracking close'.)
8. Maximize the level by slightly turning the skew adjustment screw A, while looking at the RF waveform level on the oscilloscope.

Next, maximize the level by turning the skew adjustment screw B, slightly. Repeat this procedure three times and adjust the unit to attain a maximum level.

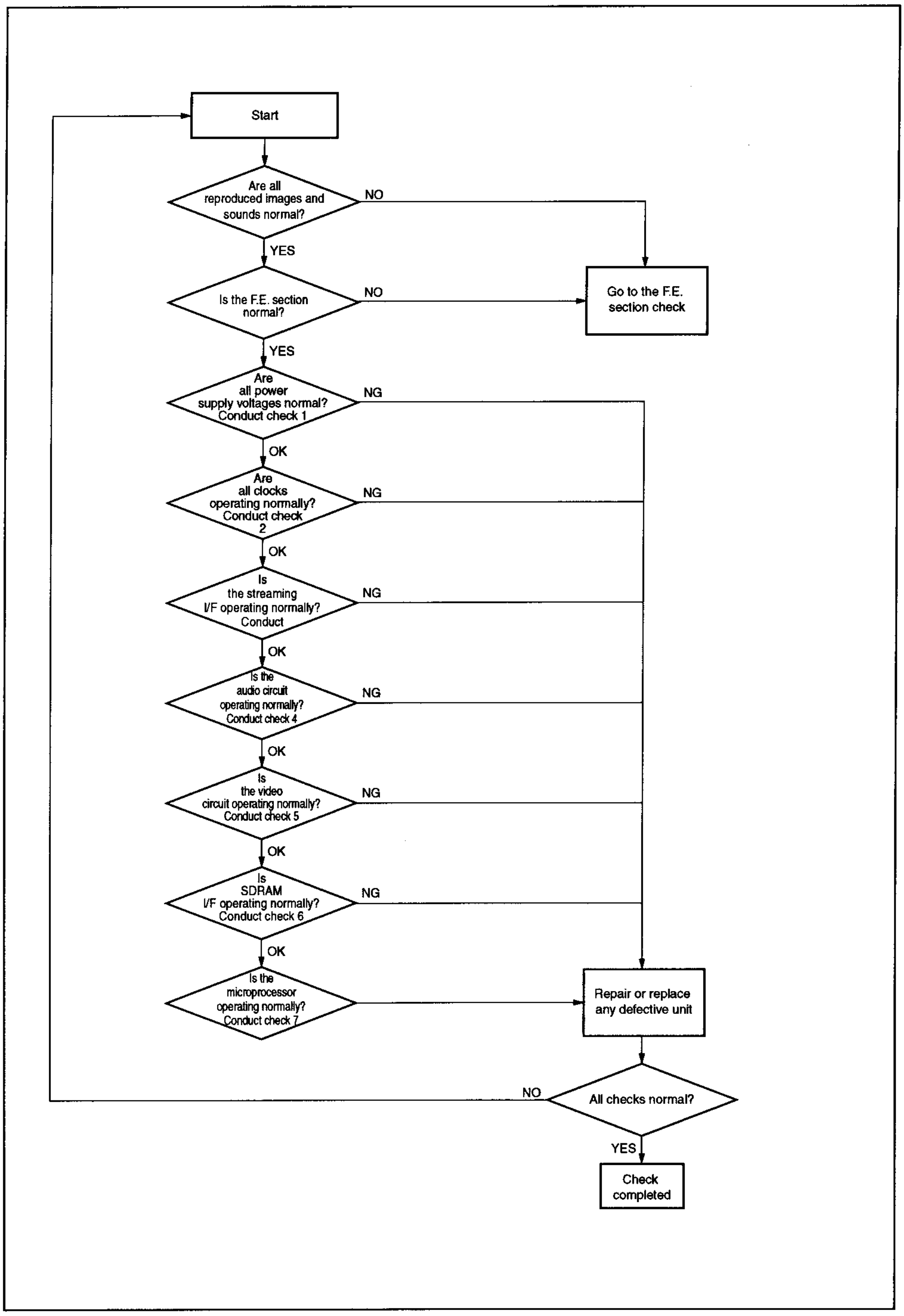
9. Turn the power OFF in the test mode, and eject the disk after verifying that it has stopped spinning.
10. Apply adhesive and screw lock materials, to the locations specified in the pick-up diagram (shown below).

Apply the adhesive material to secure the resin components on the pick-up chassis.
Apply the screw lock material to secure the screws on the pick-up chassis.
Do not apply any of these materials to the pick-up section or mechanical sections, which are not specified.
Keep the unit away from vibration or shock until the materials securely fix the components and screws in place.

PU diagram



● Back end section check flow chart


Start
Are all reproduced images and sounds normal?
NO
YES
Is the F.E. section normal?
NO
Go to the F.E. section check
YES
Are all power supply voltages normal? Conduct check 1
NG
OK
Are all clocks operating normally? Conduct check 2
NG
OK
Is the streaming I/F operating normally? Conduct
NG
OK
Is the audio circuit operating normally? Conduct check 4
NG
OK
Is the video circuit operating normally? Conduct check 5
NG
OK
Is SDRAM I/F operating normally? Conduct check 6
NG
OK
Is the microprocessor operating normally? Conduct check 7
Repair or replace any defective unit
NO
All checks normal?
YES
Check completed

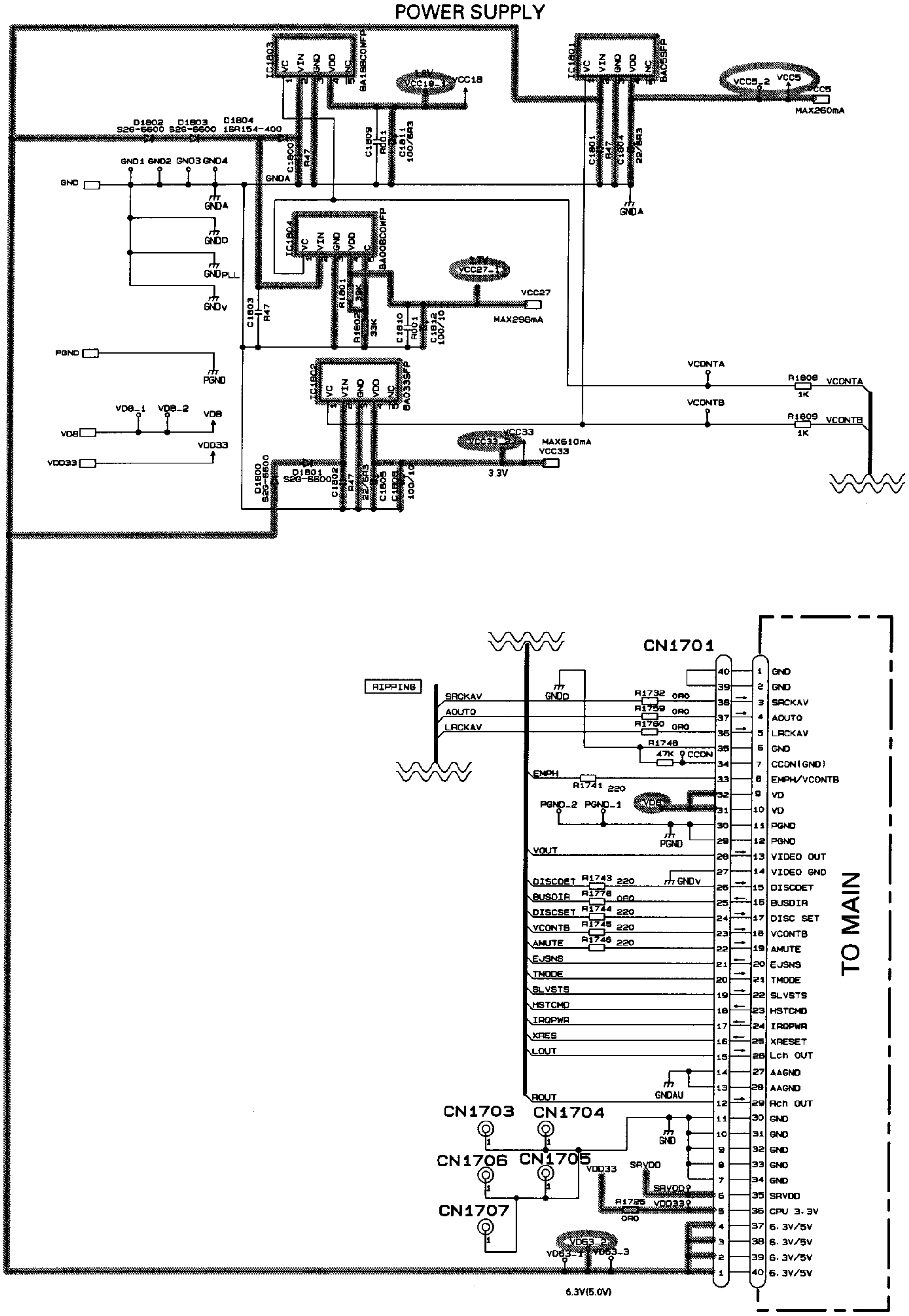
Check 1: Are all power supply voltages normal?

Reproduce DVD-REF-A1 Title 1.

Verify the voltage of the sensing pin.

If results are not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in the vicinity of IC1801 through 1804 (the section marked ① in the circuit diagram).

NO.	Verification location	Rated value	Unit
1	VD8-PGND	8±0.3	V
2	VD63-GND	6.3±0.3	V
3	VDD33-GND	3.3±0.3	V
4	SRVDD-GND	3.3±0.3	V
5	VCC5-GND	5±0.25	V
6	VCC33-GND	3.3±0.17	V
7	VCC27-GND	2.73±0.07	V
8	VCC18-GND	1.8±0.04	V


POWER SUPPLY
IC1803
VC
VIN
GND
VDD
NC
BA18BC0WFP
VCC18_1
VCC18
IC1801
BA05SFP
VCC5_2
VCC5
VCC5
MAX260mA
D1802
S2G-6600
D1803
S2G-6600
D1804
1SR154-400
C1800
R47
C1809
R001
C1811
100/6R3
C1801
R47
C1804
22/6R3
GND1
GND2
GND3
GND4
GND
GNDA
GNDD
GNDPLL
GNDV
IC1804
BA00BC0WFP
C
VCC27_1
VCC27
MAX298mA
C1803
R47
R1801
33K
R1802
33K
C1810
R001
C1812
100/10
PGND
PGND
VD8_1
VD8_2
VD8
VD8
VDD33
VDD33
VCONTA
R1808
1K
VCONTA
VCONTB
R1809
1K
VCONTB
IC1802
BA033SFP
VCC33
VCC33_2
MAX610mA
VCC33
3.3V
D1800
S2G-6600
D1801
S2G-6600
C1802
R47
22/6R3
C1805
C1806
100/10
CN1701
RIPPING
SRCKAV
AOUTO
LRCKAV
GNDD
R1732
0R0
R1759
0R0
R1760
0R0
R1748
47K
CCON
EMPH
R1741
220
PGND_2
PGND_1
VD8
PGND
VOUT
DISCDET
R1743
220
GNDV
BUSDIR
R1778
0R0
DISCSET
R1744
220
VCONTB
R1745
220
AMUTE
R1746
220
EJSNS
TMODE
SLVSTS
HSTCMD
IRQPWR
XRES
LOUT
GNDAU
ROUT
GND
CN1703
CN1704
CN1706
CN1705
CN1707
VDD33
SRVDD
SRVDD
R1725
0R0
VDD33
VD63_2
VD63_1
VD63_3
6.3V(5.0V)
1 GND
2 GND
3 SRCKAV
4 AOUTO
5 LRCKAV
6 GND
7 CCON(GND)
8 EMPH/VCONTB
9 VD
10 VD
11 PGND
12 PGND
13 VIDEO OUT
14 VIDEO GND
15 DISCDET
16 BUSDIR
17 DISC SET
18 VCONTB
19 AMUTE
20 EJSNS
21 TMODE
22 SLVSTS
23 HSTCMD
24 IRQPWR
25 XRESET
26 Lch OUT
27 AAGND
28 AAGND
29 Rch OUT
30 GND
31 GND
32 GND
33 GND
34 GND
35 SRVDD
36 CPU 3.3V
37 6.3V/5V
38 6.3V/5V
39 6.3V/5V
40 6.3V/5V
TO MAIN

Schematic diagram ①

Check 2: Are all clocks operating normally?

Reproduce DVD-REF-A1 Title 1.

Verify the circuit described in Figure ②.

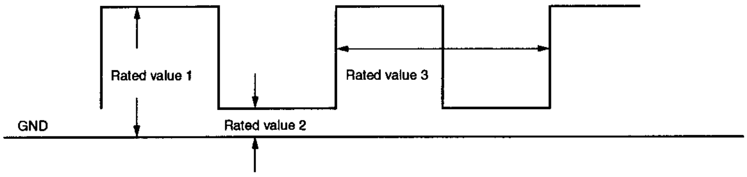
This check is the same for all DVD-V compatible modules.

Checks are to be conducted with a GND reference.

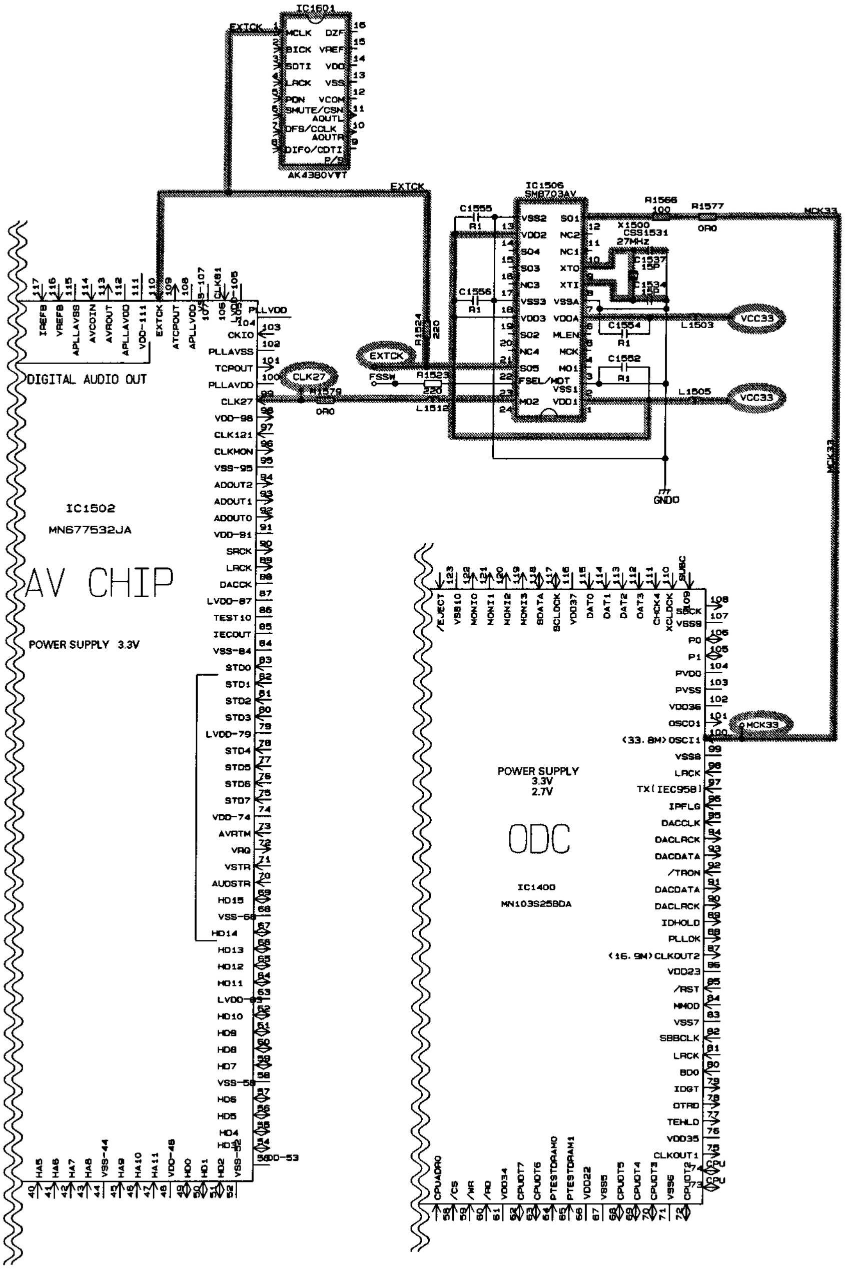
If locations listed under "verification location 2", can be verified, there will be no need to perform verifications for the locations listed under "verification location 1."

If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in the vicinity of IC1506 (the section marked ② in the circuit diagram).

NO.	Verification location 1 (contact measurements)	Verification location 2	Media	Rated value 1	Rated value 2	Rated value 3
1	CLK27	IC1502 99pin	ALL	2.65V~VCC33	GND~0.65V	27MHz±50ppm
2	EXTCK	IC1502 110pin IC1601 1pin	DVD	2.65V~VCC33	GND~0.65V	36.8640MHz± 100ppm
3	EXTCK	IC1502 110pin IC1601 1pin	CD	2.65V~VCC33	GND~0.65V	33.8688MHz± 100ppm
4	MCK33	IC1400 100pin	ALL	2.33~VCC33	GND~0.99V	33.8688MHz±100ppm



Clock rated values


IC1601
AK4380VT
MCLK
BICK
SDTI
LRCK
PDN
SMUTE/CSN
DFS/CCLK
DIF0/CDTI
DZF
VREF
VDD
VSS
VCOM
AOUTL
AOUTR
P/S
EXTCK
IC1506
SM8703AV
C1555
C1556
R1524
220
R1523
220
L1512
R1579
0R0
FSSW
R1566
100
R1577
0R0
MCK33
X1500
CSS1531
27MHz
C1537
15P
C1534
15P
C1554
C1552
L1503
L1505
VCC33
GNDD
CLK27
DIGITAL AUDIO OUT
IC1502
MN677532JA
AV CHIP
POWER SUPPLY 3.3V
ODC
IC1400
MN103S25BDA
POWER SUPPLY
3.3V
2.7V
(33.8M) OSCI1
(16.9M) CLKOUT2
TX(IEC958)

Schematic diagram ②

Check 3: Is the streaming I/F operating normally?

Reproduce DVD-REF-A1 Title 1.

Verify the circuit described in Figure ③.

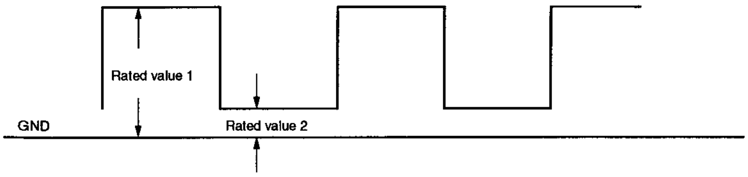
This check is the same for all DVD-V compatible modules.

Checks are to be conducted with a GND reference.

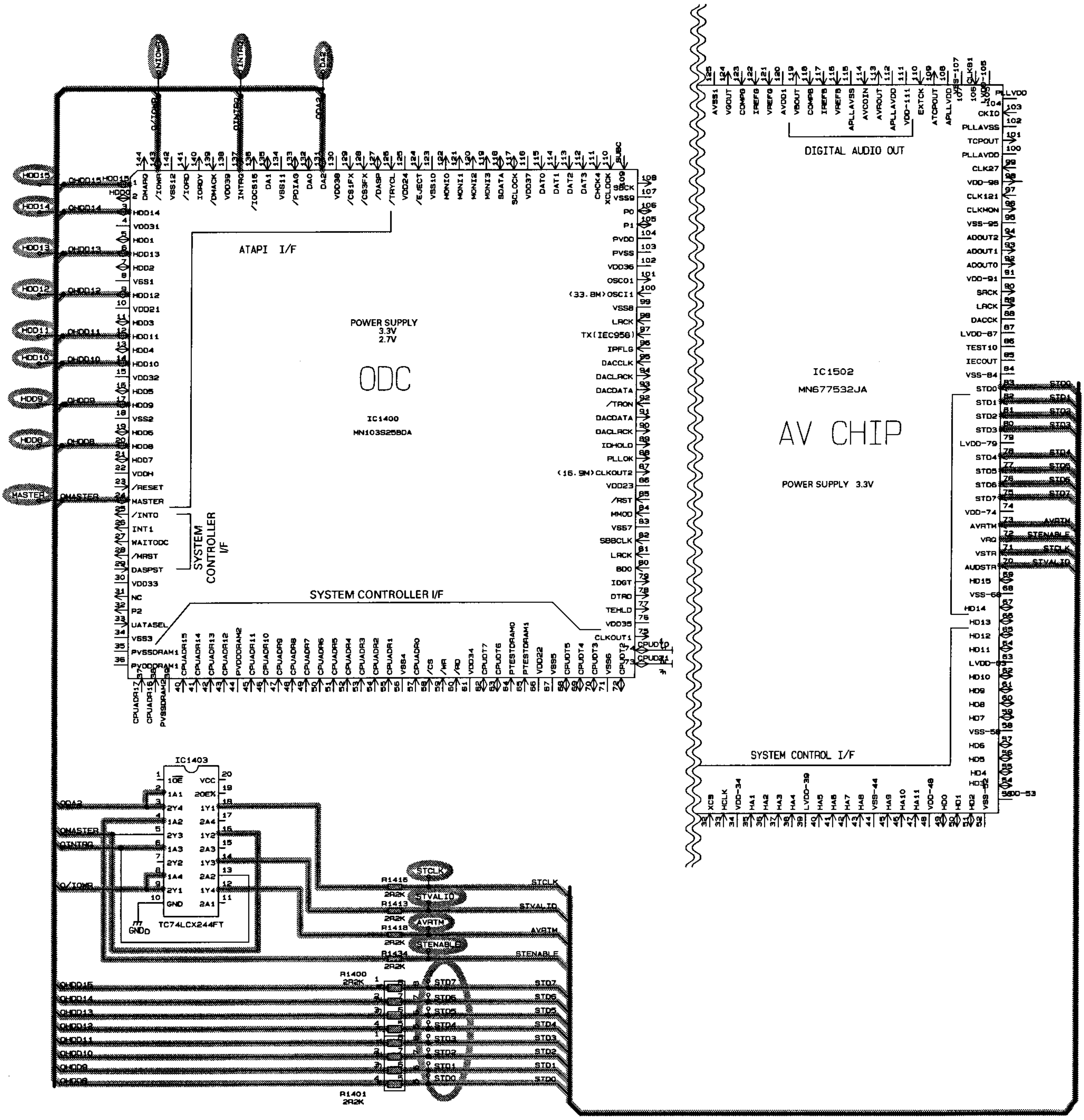
If the locations listed under "verification location 2" can be verified, then there is no need to conduct verifications for the locations listed under "verification location 1."

If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in areas where a problem occurs, for the overall sequence of "output " input" of the checked location.

NO.	Verification location 1 (contact measurements)	Verification location 2	Verification Media	Rated value 1	Rated value 2	Reference waveform	Others
1	STD0	IC1502 83pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD6 at R1401
2	STD1	IC1502 82pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD9 at R1401
3	STD2	IC1502 81pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD10 at R1401
4	STD3	IC1502 80pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD11 at R1401
5	STD4	IC1502 78pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD12 at R1401
6	STD5	IC1502 77pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD13 at R1401
7	STD6	IC1502 76pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD14 at R1401
8	STD7	IC1502 75pin	DVD	2V~VCC33	GND~0.8V	Waveform 1	Line name OHDD15 at R1401
9	AVRTM	IC1502 73pin	DVD	2V~VCC33	GND~0.8V	Waveform 2	Line name O/IOWR
10	STCLK	IC1502 71pin	DVD	2V~VCC33	GND~0.8V	Waveform 2	Line name ODA2
11	STVALID	IC1502 70pin	DVD	2V~VCC33	GND~0.8V	Waveform 2	Line name O/INTRO
12	MASTER	IC1400 24pin	DVD	2V~VCC33	GND~0.8V	Waveform 2	Line name STENABLE



Streaming I/F rated value

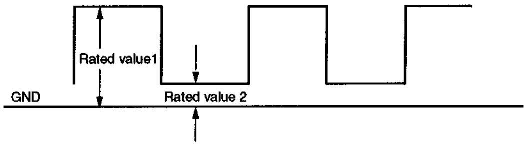

ATAPI I/F
POWER SUPPLY 3.3V 2.7V
ODC
IC1400
MN103S25BDA
SYSTEM CONTROLLER I/F
SYSTEM CONTROLLER I/F
DIGITAL AUDIO OUT
IC1502
MN677532JA
AV CHIP
POWER SUPPLY 3.3V
SYSTEM CONTROL I/F
IC1403
TC74LCX244FT
GNDD
R1415 2R2K
R1413 2R2K
R1418 2R2K
R1434 2R2K
R1400 2R2K
R1401 2R2K
STCLK
STVALID
AVRTM
STENABLE
STD0
STD1
STD2
STD3
STD4
STD5
STD6
STD7
HDD15
HDD14
HDD13
HDD12
HDD11
HDD10
HDD9
HDD8
MASTER
IOWR
INTRQ
DA2

Schematic diagram ③

Check 4: Is the audio circuit operating normally?

Reproduce DVD-REF-A1 Title 2 Chapter (48k/16-bit/1 kHz/0dB).
This check is the same for all DVD-V compatible modules.
Checks are to be conducted using GNDAU1 (sensing pins) as a reference.
If the locations, listed under "verification location 2", can be verified, there is no need to conduct verifications for the locations listed under "verification location 1."
If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in the vicinity of the main components (the section marked ④ in the circuit diagram circuit diagram).

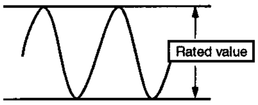
NO.	Verification location 1	Verification location 2	Rated value 1	Rated value 2	Reference waveform
1	AOUT0	IC1601 pin-3 For CXK6113, include also CN1701 pin-37	2.2V and over	0.8V and lower	Waveform 3
2	SRCKAV	IC1601 pin-2 For CXK6113, include also CN1701 pin-38	2.2V and over	0.8V and lower	Waveform 3
4	LRCKAV	IC1701 pin-4 CXK6113, include also CN1701 pin-36	2.2V and over	0.8V and lower	Waveform 3



Three serial output rated values

Checks are conducted with the measurement circuit below.

NO.	Verification location 1	Verification location 2	Rated value	Reference waveform
4	LO	CN1701 15pin	1120±150mV	Waveform 4
5	RO	CN1702 12pin	1120±150mV	Waveform 4



Analog audio outputs (LO and RO) rated values

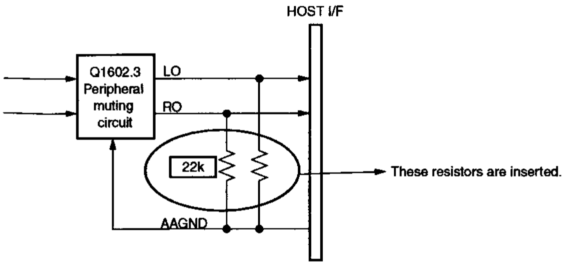
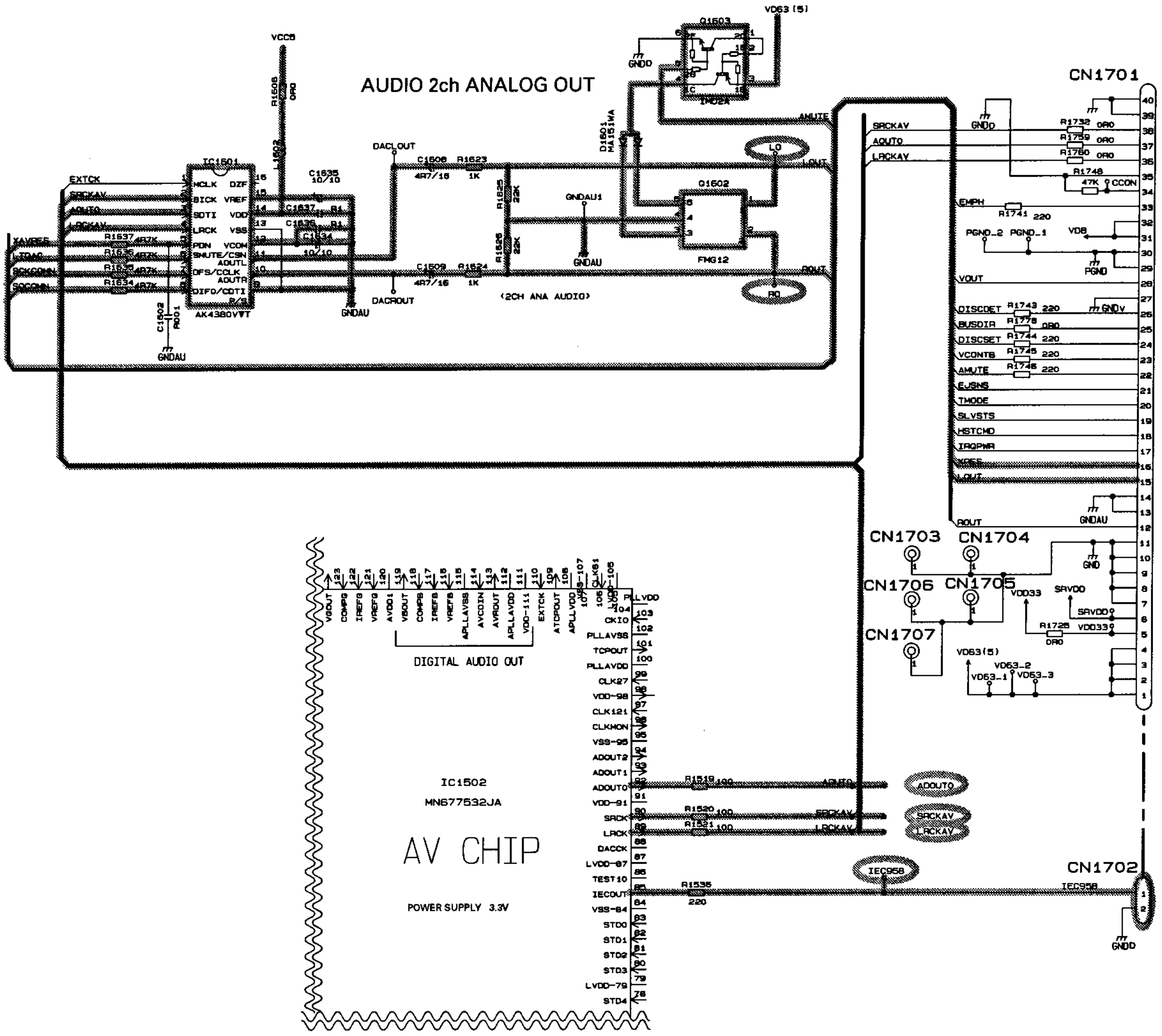


Figure 9: LO and RO output measurement circuit

NO.	Verification location 1	Verification location 2	Rated value 1	Rated value 2	Reference waveform
6	IEC958	CN1702 2pin	2.2V and over	0.8V and lower	Waveform 5


AUDIO 2ch ANALOG OUT
VCC5
R1506 0R0
L1502
IC1501
AK4380VT
MCLK
BICK
SDTI
LRCK
PDN
SMUTE/CSN
DFS/CCLK
DIF0/CDTI
DZF
VREF
VDD
VSS
VCOM
AOUTL
AOUTR
P/S
EXTCK
SRCKAV
AOUTO
LRCKAV
XAVRES
LTDAC
SCKCOMN
SOCOMN
R1637 4R7K
R1636 4R7K
R1635 4R7K
R1634 4R7K
C1502 R001
GNDAU
C1635 10/10
C1637
C1636
C1634 10/10
R1
DACLOUT
DACROUT
C1506 4R7/16
R1623 1K
C1509 4R7/16
R1624 1K
R1625 22K
R1626 22K
GNDAU1
(2CH ANA AUDIO)
D1601 MA151WA
Q1603
IMD2A
GNDD
VD63 (5)
Q1602
FMG12
AMUTE
LOUT
ROUT
LO
RO
CN1701
SRCKAV
AOUTO
LRCKAV
GNDD
R1732 0R0
R1759 0R0
R1760 0R0
R1748
47K
CCON
EMPH
R1741 220
PGND_2
PGND_1
VD8
PGND
VOUT
DISCDET
R1743 220
GNDV
BUSDIR
R1778 0R0
DISCSET
R1744 220
VCONTB
R1745 220
AMUTE
R1746 220
EJSNS
TMODE
SLVSTS
HSTCMD
IRQPWR
XRES
LOUT
ROUT
GNDAU
GND
CN1703
CN1704
CN1706
CN1705
CN1707
VDD33
SRVDD
R1728 0R0
VD63(5)
VD63_1
VD63_2
VD63_3
IC1502
MN677532JA
AV CHIP
POWER SUPPLY 3.3V
DIGITAL AUDIO OUT
VGOUT
COMPG
IREFG
VREFG
AVDD1
VBOUT
COMPB
IREFB
VREFB
APLLAVSS
AVCOIN
AVROUT
APLLAVDD
VDD-111
EXTCK
ATCPOUT
APLLVDD
VSS-107
CLK81
LVDD-105
PLLVDD
CKIO
PLLAVSS
TCPOUT
PLLAVDD
CLK27
VDD-98
CLK121
CLKMON
VSS-95
ADOUT2
ADOUT1
ADOUT0
VDD-91
SRCK
LRCK
DACCK
LVDD-87
TEST10
IECOUT
VSS-84
STD0
STD1
STD2
STD3
LVDD-79
STD4
R1519 100
R1520 100
R1521 100
ADOUT0
SRCKAV
LRCKAV
R1535 220
IEC958
CN1702
GNDD

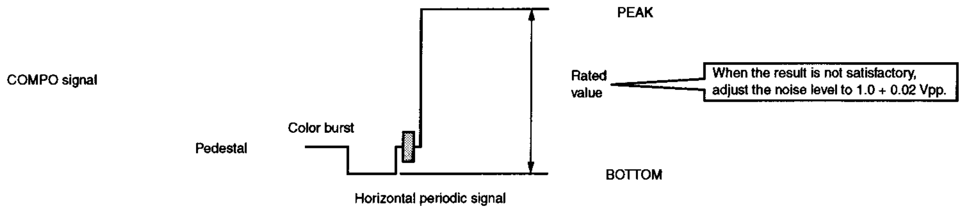
Schematic diagram ④

Check 5: Is the video circuit operated normally?

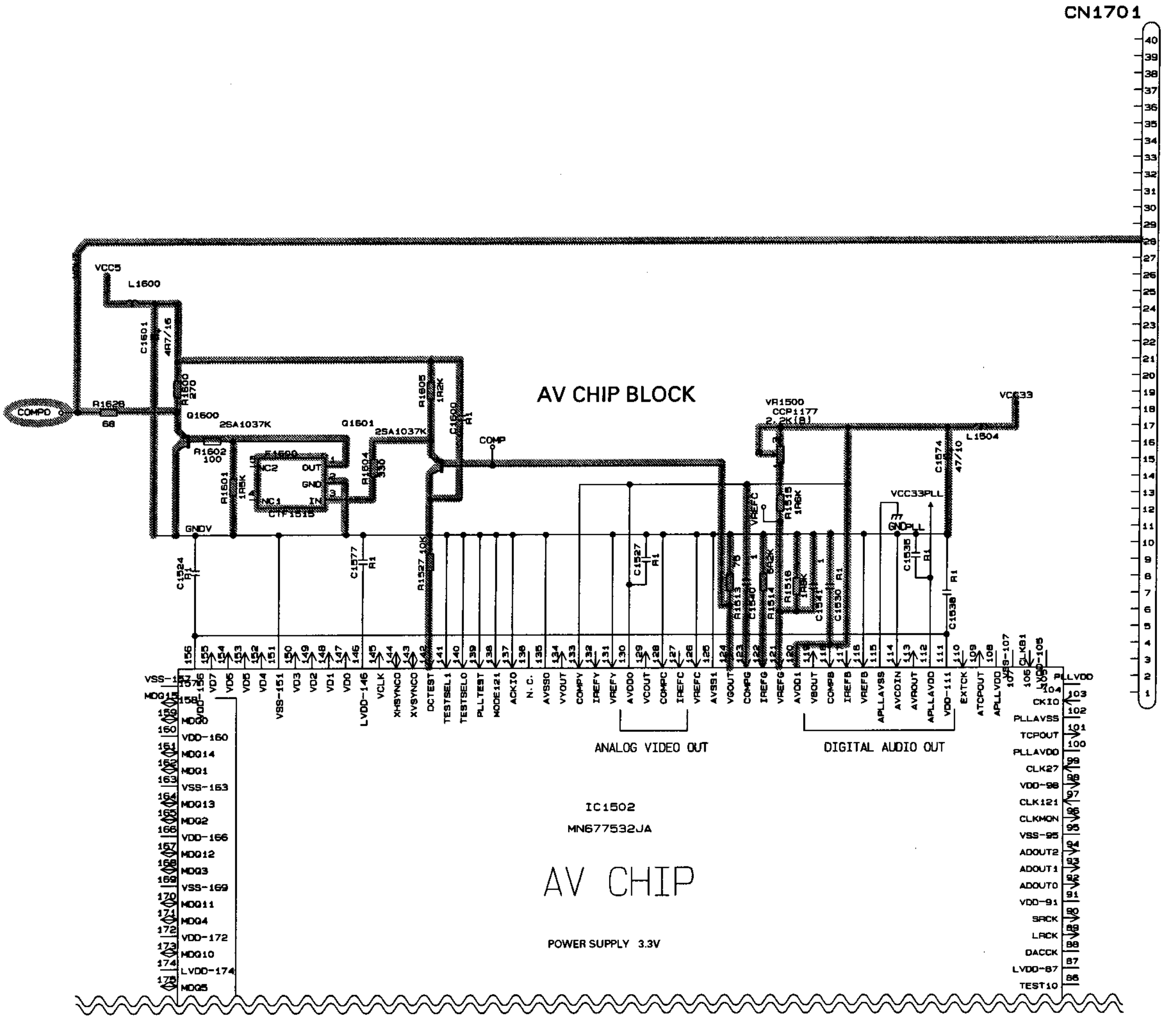
Reproduce DVD-REF-A1 Title 2 Chapters (White 100IRE).
Monitor the output with the oscilloscope, by setting the COMPO signal to a GND reference.
Set the Trigger mode to the TV trigger, and the Trigger line to line-150.

NO.	Verification location (sensing pin)	Rated value	Reference waveform
1	COMPO	1.0±0.02Vpp	Waveform 6

If the result is not satisfactory, check to see if there are any problems with resin flux cored solder, parts and components, in the vicinity of line-150 (the section marked ⑤ in the circuit diagram) and peripheral components


PEAK
COMPO signal
Rated value
When the result is not satisfactory, adjust the noise level to 1.0 + 0.02 Vpp.
Color burst
Pedestal
BOTTOM
Horizontal periodic signal

Composite signal 100% output waveform

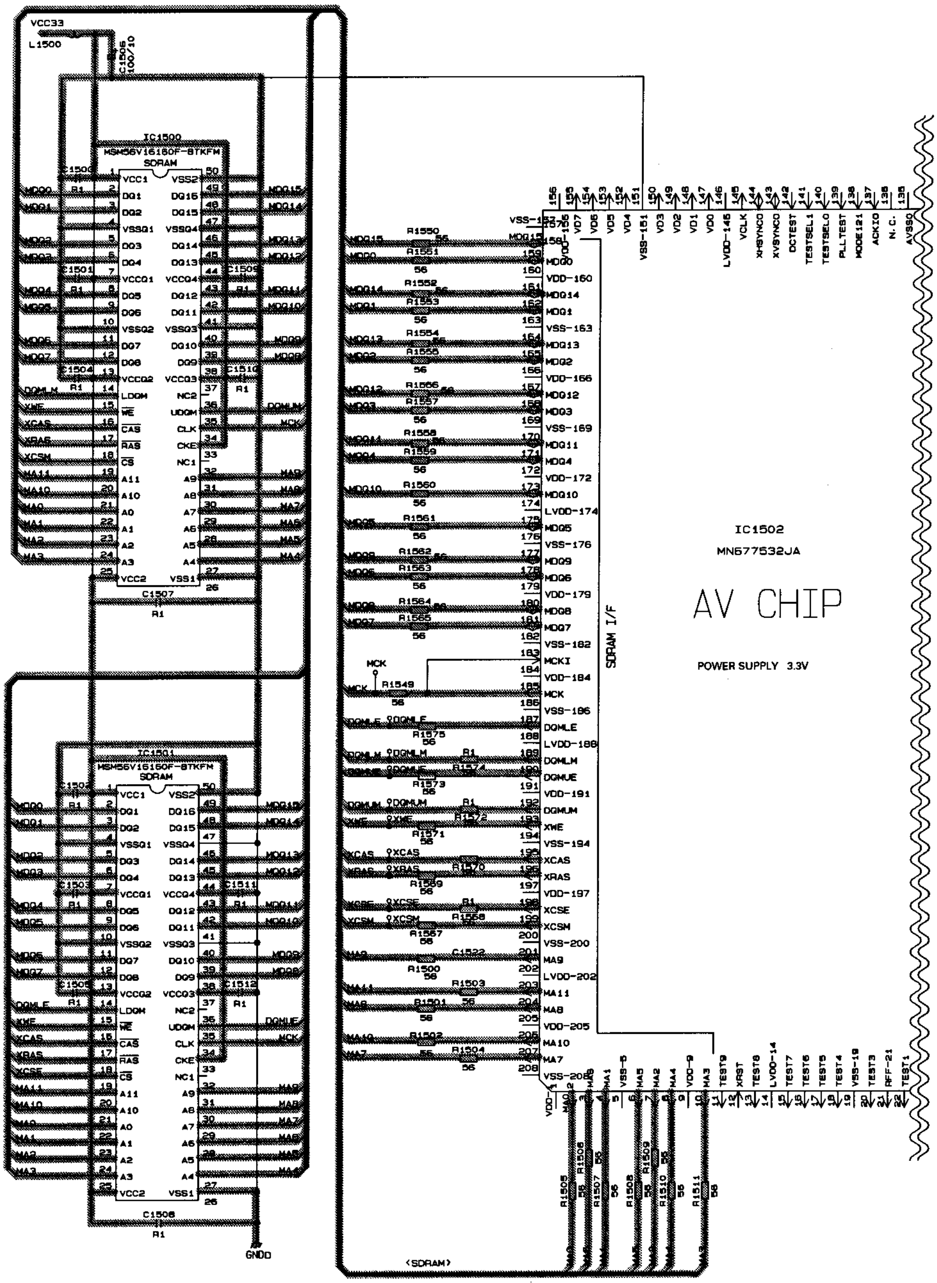

AV CHIP BLOCK
CN1701
COMPO
R1628
68
VCC5
L1600
C1601
4R7/16
R1600
270
Q1600
2SA1037K
Q1601
2SA1037K
R1602
100
R1601
1R5K
F1500
CTF1515
OUT
GND
IN
NC1
NC2
R1604
330
R1605
1R2K
C1600
R1
COMP
GNDV
C1524
R1
C1577
R1
R1527 10K
C1527
R1
VR1500
CCP1177
2.2K(B)
VREFC
R1515
1R5K
R1513
75
R1514
R1516
C1540
C1541
C1530
R1
C1574
47/10
L1504
VCC33
VCC33PLL
GNDPLL
C1535
R1
C1536
R1
ANALOG VIDEO OUT
DIGITAL AUDIO OUT
IC1502
MN677532JA
AV CHIP
POWER SUPPLY 3.3V
VSS-157
MDQ15
VDD-156
VD7
VD6
VD5
VD4
VSS-151
VD3
VD2
VD1
VD0
LVDD-146
VCLK
XHSYNCO
XVSYNCO
DCTEST
TESTSEL1
TESTSEL0
PLLTEST
MODE121
ACKIO
N.C.
AVSS0
VYOUT
COMPY
IREFY
VREFY
AVDD0
VCOUT
COMPC
IREFC
VREFC
AVSS1
VGOUT
COMPG
IREFG
VREFG
AVDD1
VBOUT
COMPB
IREFB
VREFB
APLLAVSS
AVCOIN
AVROUT
APLLAVDD
VDD-111
EXTCK
ATCPOUT
APLLVDD
VSS-107
CLKB1
LVDD-105
PLLVDD
CKIO
PLLAVSS
TCPOUT
PLLAVDD
CLK27
VDD-98
CLK121
CLKMON
VSS-95
ADOUT2
ADOUT1
ADOUT0
VDD-91
SRCK
LRCK
DACCK
LVDD-87
TEST10
MDQ0
VDD-160
MDQ14
MDQ1
VSS-163
MDQ13
MDQ2
VDD-166
MDQ12
MDQ3
VSS-169
MDQ11
MDQ4
VDD-172
MDQ10
LVDD-174
MDQ5

Schematic diagram ⑤

Check 6: Is SDRAM I/F operating normally?

Reproduce DVD-REF-A1 Title 1.
Verify the circuit described in Figure ⑥.
This check is the same for all DVD-V compatible modules.
Check the conductivity of both the "Verification location 1" and the "Verification location2."
If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in areas where a problem occurs, for the overall sequence of "output " input" of the checked location.

NO.	Signal name	Verification location 1	Verification location 2	Rated value	Others
1	MA0	IC1500/1501 21pin	IC1502 2pin	56Ω ± 5%	Same for both IC1500 and IC1501.
2	MA1	IC1500/1501 22pin	IC1502 4pin	56Ω ± 5%	Same for both IC1500 and IC1501.
3	MA2	IC1500/1501 23pin	IC1502 7pin	56Ω ± 5%	Same for both IC1500 and IC1501.
4	MA3	IC1500/1501 24pin	IC1502 10pin	56Ω ± 5%	Same for both IC1500 and IC1501.
5	MA4	IC1500/1501 27pin	IC1502 8pin	56Ω ± 5%	Same for both IC1500 and IC1501.
6	MA5	IC1500/1501 28pin	IC1502 6pin	56Ω ± 5%	Same for both IC1500 and IC1501.
7	MA6	IC1500/1501 29pin	IC1502 3pin	56Ω ± 5%	Same for both IC1500 and IC1501.
8	MA7	IC1500/1501 30pin	IC1502 207pin	56Ω ± 5%	Same for both IC1500 and IC1501.
9	MA8	IC1500/1501 31pin	IC1502 204pin	56Ω ± 5%	Same for both IC1500 and IC1501.
10	MA9	IC1500/1501 32pin	IC1502 201pin	56Ω ± 5%	Same for both IC1500 and IC1501.
11	MA10	IC1500/1501 20pin	IC1502 206pin	56Ω ± 5%	Same for both IC1500 and IC1501.
12	MA11	IC1500/1501 19pin	IC1502 203pin	56Ω ± 5%	Same for both IC1500 and IC1501.
13	MDQ0	IC1500/1501 2pin	IC1502 159pin	56Ω ± 5%	Same for both IC1500 and IC1501.
14	MDQ1	IC1500/1501 3pin	IC1502 162pin	56Ω ± 5%	Same for both IC1500 and IC1501.
15	MDQ2	IC1500/1501 5pin	IC1502 165pin	56Ω ± 5%	Same for both IC1500 and IC1501.
16	MDQ3	IC1500/1501 6pin	IC1502 168pin	56Ω ± 5%	Same for both IC1500 and IC1501.
17	MDQ4	IC1500/1501 8pin	IC1502 171pin	56Ω ± 5%	Same for both IC1500 and IC1501.
18	MDQ5	IC1500/1501 9pin	IC1502 175pin	56Ω ± 5%	Same for both IC1500 and IC1501.
19	MDQ6	IC1500/1501 11pin	IC1502 178pin	56Ω ± 5%	Same for both IC1500 and IC1501.
20	MDQ7	IC1500/1501 12pin	IC1502 181pin	56Ω ± 5%	Same for both IC1500 and IC1501.
21	MDQ8	IC1500/1501 39pin	IC1502 180pin	56Ω ± 5%	Same for both IC1500 and IC1501.
22	MDQ9	IC1500/1501 40pin	IC1502 177pin	56Ω ± 5%	Same for both IC1500 and IC1501.
23	MDQ10	IC1500/1501 42pin	IC1502 173pin	56Ω ± 5%	Same for both IC1500 and IC1501.
24	MDQ11	IC1500/1501 43pin	IC1502 170pin	56Ω ± 5%	Same for both IC1500 and IC1501.
25	MDQ12	IC1500/1501 45pin	IC1502 167pin	56Ω ± 5%	Same for both IC1500 and IC1501.
26	MDQ13	IC1500/1501 46pin	IC1502 164pin	56Ω ± 5%	Same for both IC1500 and IC1501.
27	MDQ14	IC1500/1501 48pin	IC1502 161pin	56Ω ± 5%	Same for both IC1500 and IC1501.
28	MDQ15	IC1500/1501 49pin	IC1502 158pin	56Ω ± 5%	Same for both IC1500 and IC1501.
29	MCK	IC1500/1501 35pin	IC1502 185pin	56Ω ± 5%	Same for both IC1500 and IC1501.
30	XWE	IC1500/1501 15pin	IC1502 193pin	56Ω ± 5%	Same for both IC1500 and IC1501.
31	XCAS	IC1500/1501 16pin	IC1502 195pin	56Ω ± 5%	Same for both IC1500 and IC1501.
32	XRAS	IC1500/1501 17pin	IC1502 196pin	56Ω ± 5%	Same for both IC1500 and IC1501.
33	XCSM	IC1500 18pin	IC1502 199pin	56Ω ± 5%	Same for both IC1500 and IC1501.
34	XCSE	IC1501 18pin	IC1502 198pin	56Ω ± 5%	
35	DQMUM	IC1500 14pin	IC1502 192pin	56Ω ± 5%	
36	DQMLM	IC1500 36pin	IC1502 189pin	56Ω ± 5%	
37	DQMUE	IC1500 14pin	IC1502 190pin	56Ω ± 5%	
38	DQMLE	IC1500 36pin	IC1502 187pin	56Ω ± 5%	

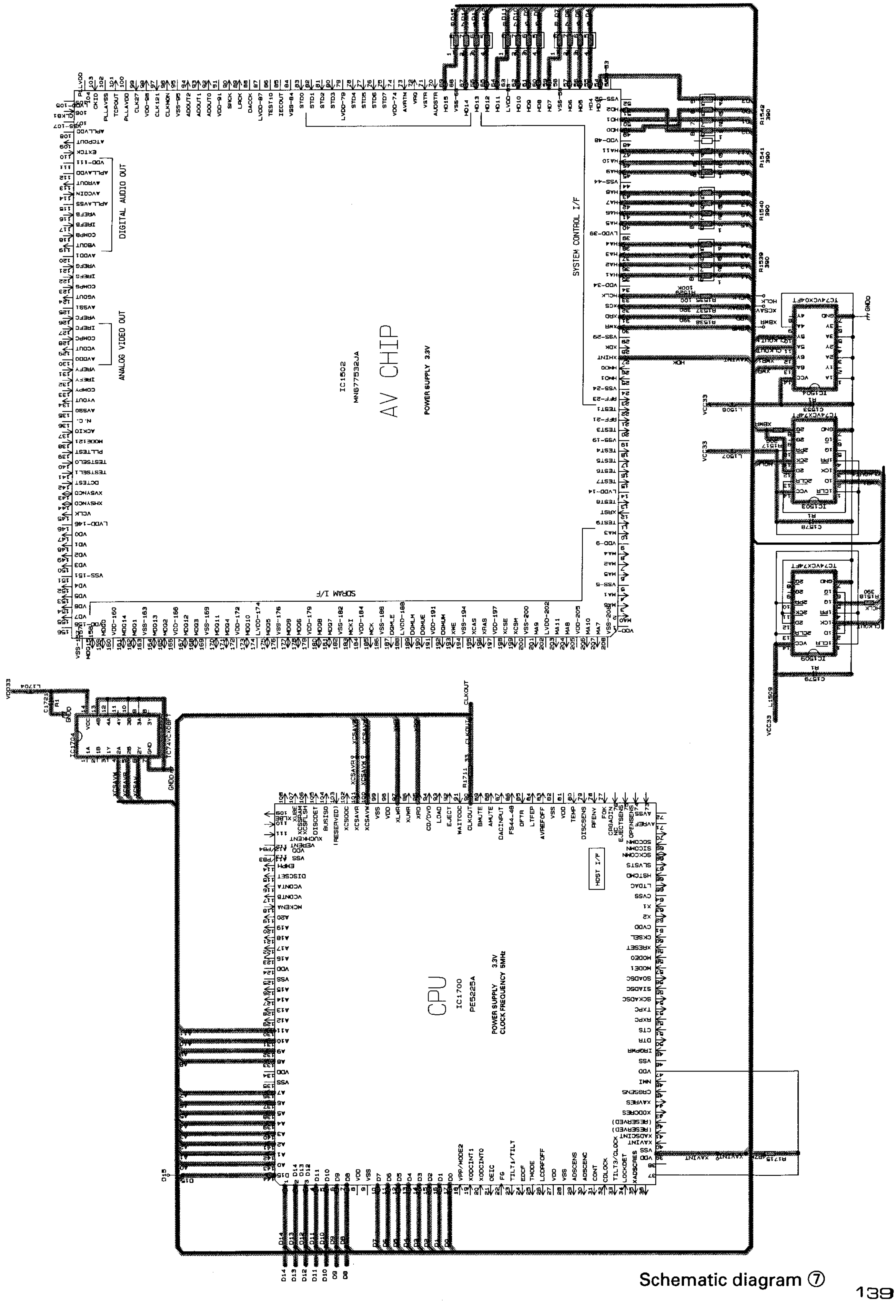

VCC33
L1500
C1506
IC1500
MSM56V16160F-8TKFM
SDRAM
IC1501
MSM56V16160F-8TKFM
SDRAM
C1507
C1508
GNDD
IC1502
MN677532JA
AV CHIP
POWER SUPPLY 3.3V
SDRAM I/F
MCK
R1549
<SDRAM>

Schematic diagram ⑥

Check 7: Is the microprocessor operating normally?

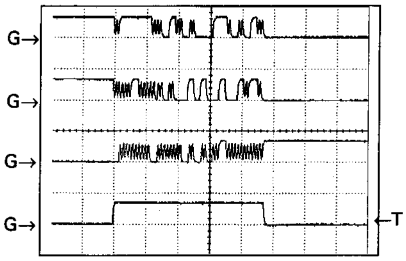
Verify the circuit described in Figure ⑦.
This check is the same for all DVD-V compatible modules.
Check the conductivity of both the "Verification location 1" and the "Verification location2."
If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in areas where a problem occurs, for the overall sequence of "output – input" of the checked location.

NO.	Signal name	Verification location 1	Verification location 2	Verification Media	Rated value	Others
1	A1	IC1700 142pin	IC1502 35pin	ALL	390Ω ± 5%	
2	A2	IC1700 141pin	IC1502 36pin	ALL	390Ω ± 5%	
3	A3	IC1700 140pin	IC1502 37pin	ALL	390Ω ± 5%	
4	A4	IC1700 139pin	IC1502 38pin	ALL	390Ω ± 5%	
5	A5	IC1700 138pin	IC1502 40pin	ALL	390Ω ± 5%	
6	A6	IC1700 137pin	IC1502 41pin	ALL	390Ω ± 5%	
7	A7	IC1700 136pin	IC1502 42pin	ALL	390Ω ± 5%	
8	A8	IC1700 133pin	IC1502 43pin	ALL	390Ω ± 5%	
9	A9	IC1700 132pin	IC1502 45pin	ALL	390Ω ± 5%	
10	A10	IC1700 131pin	IC1502 46pin	ALL	390Ω ± 5%	
11	A11	IC1700 130pin	IC1502 47pin	ALL	390Ω ± 5%	
12	D0	IC1700 17pin	IC1502 49pin	ALL	390Ω ± 5%	
13	D1	IC1700 16pin	IC1502 50pin	ALL	390Ω ± 5%	
14	D2	IC1700 15pin	IC1502 51pin	ALL	390Ω ± 5%	
15	D3	IC1700 14pin	IC1502 54pin	ALL	390Ω ± 5%	
16	D4	IC1700 13pin	IC1502 55pin	ALL	390Ω ± 5%	
17	D5	IC1700 12pin	IC1502 56pin	ALL	390Ω ± 5%	
18	D6	IC1700 11pin	IC1502 57pin	ALL	390Ω ± 5%	
19	D7	IC1700 10pin	IC1502 59pin	ALL	390Ω ± 5%	
20	D8	IC1700 7pin	IC1502 60pin	ALL	390Ω ± 5%	
21	D9	IC1700 6pin	IC1502 61pin	ALL	390Ω ± 5%	
22	D10	IC1700 5pin	IC1502 62pin	ALL	390Ω ± 5%	
23	D11	IC1700 4pin	IC1502 64pin	ALL	390Ω ± 5%	
24	D12	IC1700 3pin	IC1502 65pin	ALL	390Ω ± 5%	
25	D13	IC1700 2pin	IC1502 66pin	ALL	390Ω ± 5%	
26	D14	IC1700 1pin	IC1502 67pin	ALL	390Ω ± 5%	
27	D15	IC1700 144pin	IC1502 69pin	ALL	390Ω ± 5%	
28	XCSAVR	IC1700 101pin	IC1704 5pin	ALL	0Ω	
29	XCSAVW	IC1700 100pin	IC1704 4pin	ALL	0Ω	
30	XCSAV	IC1704 6pin	IC1502 32pin	ALL	390Ω ± 5%	
31	XAVINT	IC1700 39pin	IC1502 27pin	ALL	0Ω	
32	XRD	IC1700 95pin	IC1502 31pin	ALL	390Ω ± 5%	
33	CLKOUT	IC1700 90pin	IC1509 3pin	ALL	33Ω	Dividing circuit For verification location 1, include also IC1054 pin-11
34	HCLK	IC1509 5pin	IC1502 33pin	ALL	200Ω ± 5%	
35	XWR	IC1700 97pin	IC1504 13pin	ALL	0Ω	
36	XBWR	IC1503 8pin	IC1502 30pin	ALL	200Ω ± 5%	


AV CHIP
IC1502
MN677532JA
POWER SUPPLY 3.3V
DIGITAL AUDIO OUT
ANALOG VIDEO OUT
SYSTEM CONTROL I/F
SDRAM I/F
CPU
IC1700
PE5225A
POWER SUPPLY 3.3V
CLOCK FREQUENCY 5MHz
HOST I/F
IC1503
TC74VCX74FT
IC1504
TC74VCX04FT
IC1509
TC74VCX74FT
IC1704
TC74VCX08FT
R1539 390
R1540 390
R1541 390
R1542 390
R1518 390
R1529 100K
R1536 100
R1537 390
R1538 390
R1711 33
R1715
L1507
L1508
L1509
L1704
C1578
C1579
C1721
VCC33
VDD33
CLKOUT
XCSAVM
XCSAVR
XCSAVW
XRD
XWR
HCK
XAVINT
D15
D14
D13
D12
D11
D10
D9
D8
D7
D6
D5
D4
D3
D2
D1
D0

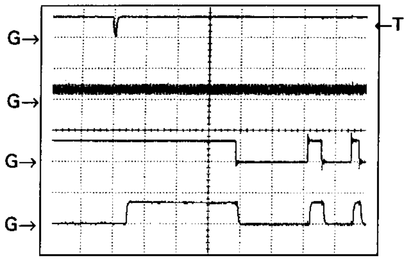
Note:1. The encircled number denote measuring pointes in the circuit diagram.
2. Reference voltage VHALF : 1.65V

⑪ CH1: STD1
⑫ CH2: STD4
⑬ CH3: STD7
⑭ CH4: STENABLE
5V/div. 2μs/div.



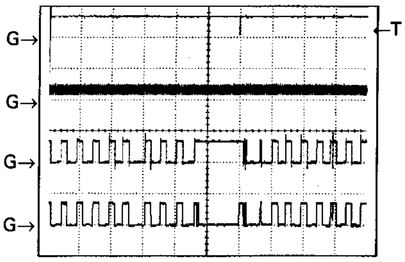
Waveform1

⑮ CH1: AVRTM
⑯ CH2: STCLK
⑰ CH3: STVALID
⑭ CH4: STENABLE
5V/div. 2μs/div.



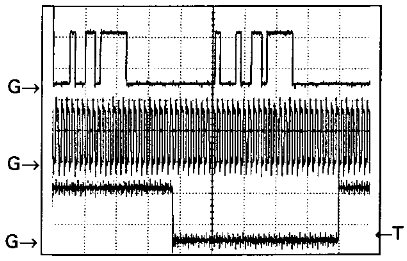
Waveform2(1)

⑮ CH1: AVRTM
⑯ CH2: STCLK
⑰ CH3: STVALID
⑭ CH4: STENABLE
5V/div. 50μs/div.



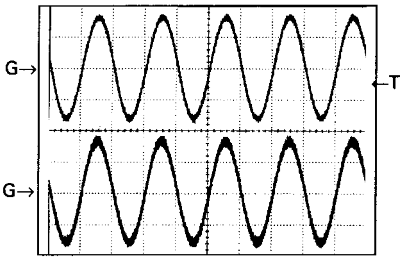
Waveform2(2)

⑱ CH1: AOUT0
⑲ CH2: SRCKAV
⑳ CH3: LRCKAV
2V/div. 2μs/div.



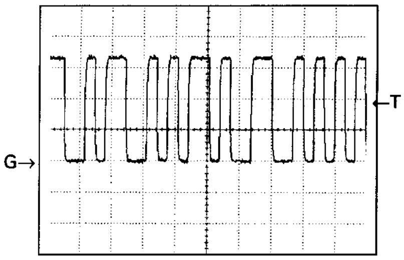
Waveform3

㉒ CH1: LO
㉓ CH2: RO
1V/div. 500μs/div.



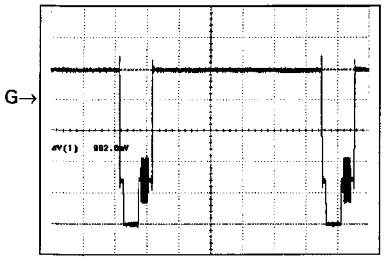
Waveform4

㉑ CH1: IEC958 1V/div. 500ns/div.



Waveform5

㉔ CH1: COMPO 200mV/div. 10μs/div.
[White 100% output]



Waveform6

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TEST MODE

● Navigation Test Modes

1. Types of Test Modes

There are two types of test modes:

1. Production Engineering Specification (this type is not available for service uses).
2. Service Specification, ROM / SDRAM version

This type is available when the system start-up is conducted from system software in ROM.

2. Test Mode System Start-Up Method

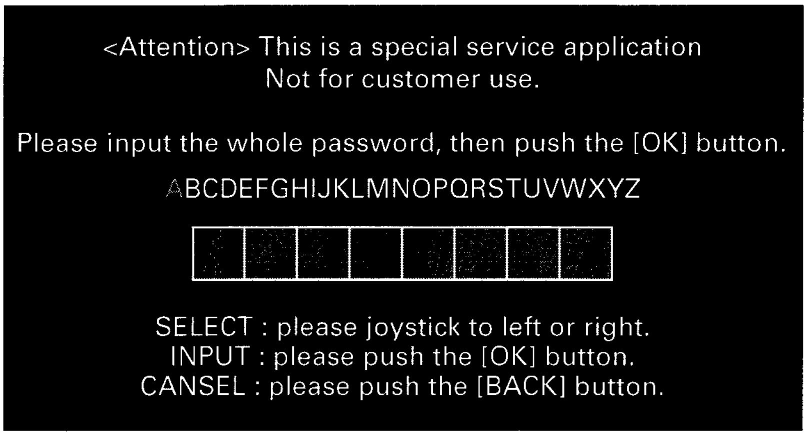
Service Specification Version (ROM / SDRAM version):

1. Press both the RESET and EJECT buttons simultaneously, when +Battery and ACC are both in an ON condition.
2. Release the RESET button only.
3. When the password entry screen is displayed, release the EJECT button.
4. Enter the password.
5. Once the password has been entered, press the OK button.
6. If the system matches the entered password the test mode menu will be displayed.

* Ordinarily, the ROM version will start up. However, if the system software is being stored on an SDRAM, and if the ACC is turned ON while the EJECT button only is being pressed, the software on the SDRAM will start up.

[Password]
The password is "2580456".
Enter the password using the ten-key pad, then press the OK button.
All the alphabetical characters displayed are dummy displays.
Seven digits are necessary for the password. Entering eight digits will result in a password error.

- Password Entry Screen



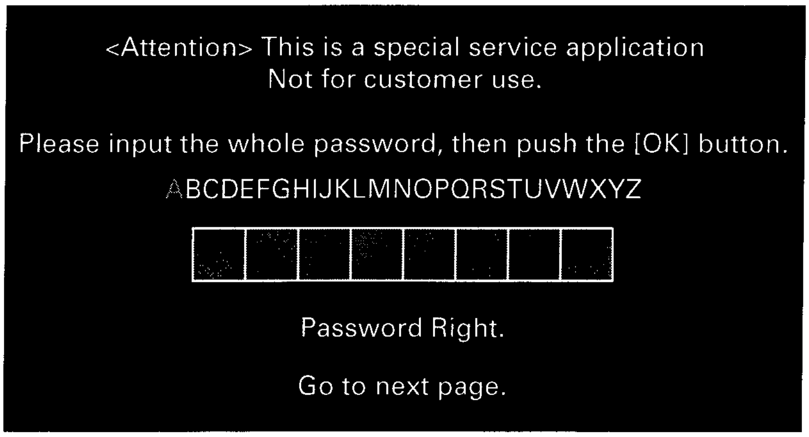
<Attention> This is a special service application
Not for customer use.

Please input the whole password, then push the [OK] button.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

SELECT : please joystick to left or right.
INPUT : please push the [OK] button.
CANSEL : please push the [BACK] button.

- Password OK screen:
  This screen is displayed for approximately two seconds, then automatically changes to the menu screen.



<Attention> This is a special service application
Not for customer use.

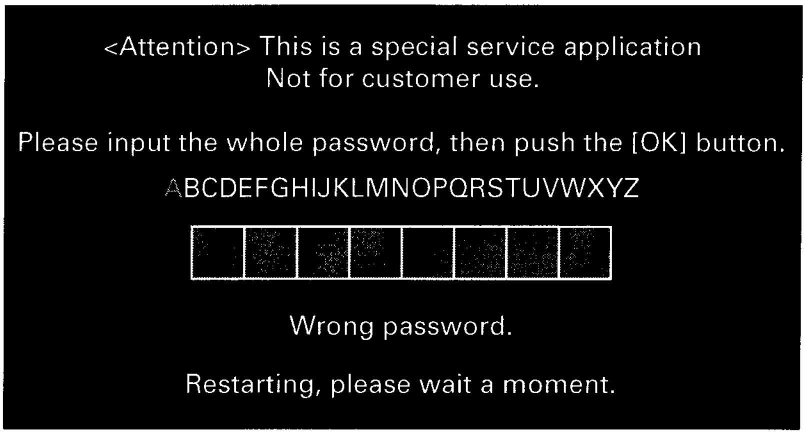
Please input the whole password, then push the [OK] button.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Password Right.

Go to next page.

- Password NG screen



<Attention> This is a special service application
Not for customer use.

Please input the whole password, then push the [OK] button.

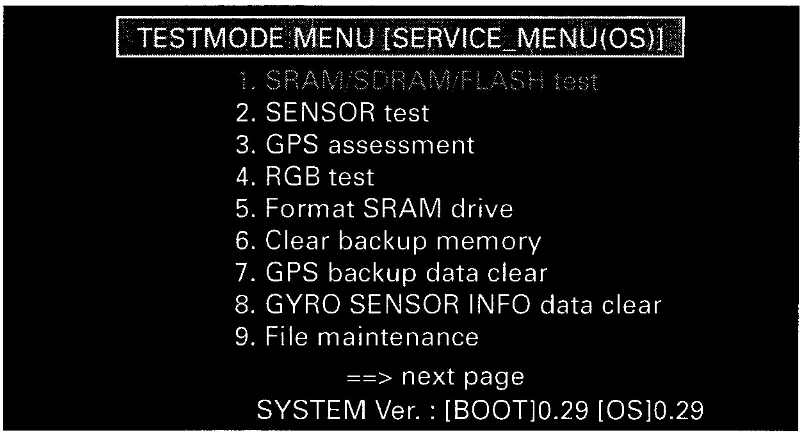
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Wrong password.

Restarting, please wait a moment.

3. Service Mode Menu

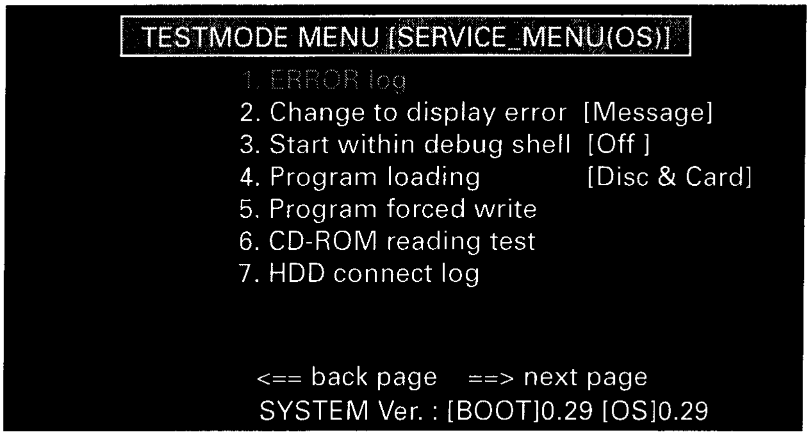
Service Specification Version (ROM / SDRAM version)



TESTMODE MENU [SERVICE_MENU(OS)]
1. SRAM/SDRAM/FLASH test
2. SENSOR test
3. GPS assessment
4. RGB test
5. Format SRAM drive
6. Clear backup memory
7. GPS backup data clear
8. GYRO SENSOR INFO data clear
9. File maintenance
==> next page

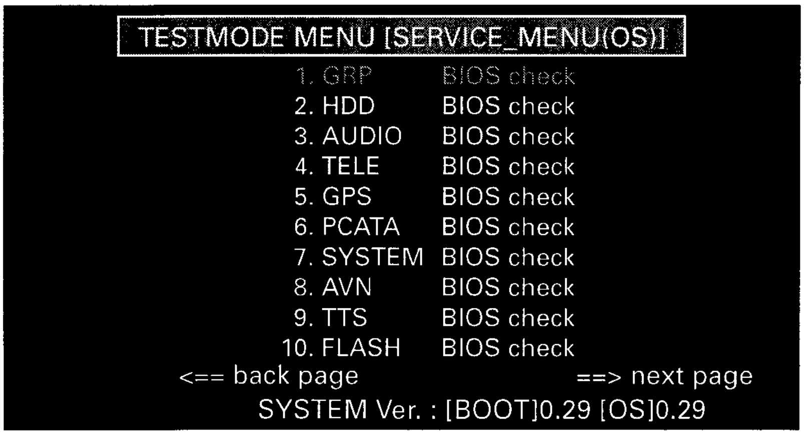
SYSTEM Ver. : [BOOT]0.29 [OS]0.29

1. SRAM / SDRAM / FLASH test	SRAM / SDRAM / FLASH Tests Tests can be started by pressing the OK button. SRAM: Device and bus tests are conducted to all areas of the SRAM. Data is protected during the test. SDRAM: Device and bus tests are conducted to all areas of the SDRAM, by dividing the areas into BIOS / USER areas. During the device tests, data in the BIOS area is not protected, while the data in the USER area is protected During the bus test, data patterns are written in the USER area, therefore, the data in the USER area is not protected. FLASH: The CRC-CCITT codes are calculated from all areas within the range specified by the ROM, and are verified to match with the code values stored in the ROM. When a test process has been completed, the successfully (OK) completed process will be displayed in green on the screen's display listing. Pressing the OK button will return the display to the menu screen.
2. Sensor test	Sensor tests Tests on the G-sensor, gyro, power supply voltage and mechanical installation conditions, are conducted. Pressing the BACK key will return the display to the menu screen.
3. GPS assessment	GPS evaluation system start up Tests on the availability and usability of the GPS evaluation system are conducted. Pressing the BACK key will return the display to the menu screen.
4. RGB test	Display images RGB rendering checks RGB rendering tests (The upper half consists of eight colors of black, blue, red, pink, green, light blue, yellow and white, as well as the lower half three colors of red, green and blue.) -> Red (full) -> Green (full) -> Blue (full) -> The color toggle can be implemented by using the <- and -> keys. Pressing the BACK key will return the display to the menu screen.
5. Format SRAM drive	SRAM formatting The SRAM area used by the application will be initialized. When the initialization process has been completed, the display will return to the menu screen.
6. Clear backup memory	Backup variable initialization The SRAM area used by the system software will be initialized. When the process has been completed, the system will reboot.
7. GPS backup data clear	GPS backup data clearing The SRAM area, used by the GPS program, will be initialized. When the process has been completed, the display will return to the menu screen.
8. GYRO SENSOR INFO clear	Gyro sensor's learning function data clearing The learning values stored in the gyro sensor will be cleared. When the process has been completed, the display will return to the menu screen.
9. File Maintenance	File management function test Conducts formatting of the SRAM drive and PC card (ATA Flash Card). Data stored in the SRAM can be extracted and copied to the PC Card. Data extracted from the SRAM to the PC Card can be copied to the SRAM again.



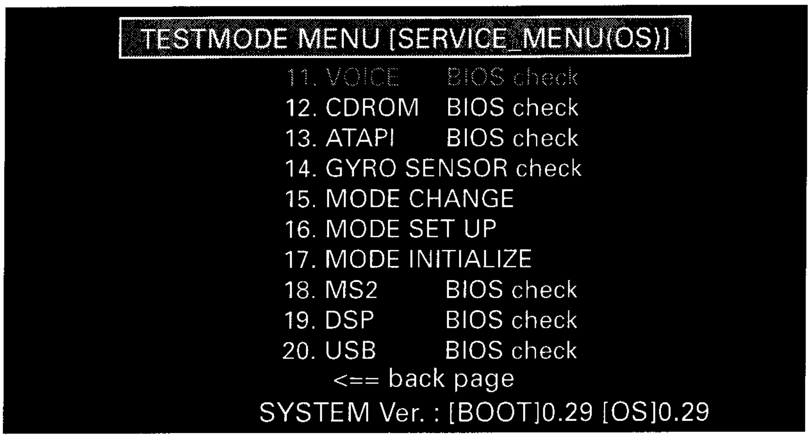
```
TESTMODE MENU [SERVICE_MENU(OS)]
    1. ERROR log
    2. Change to display error  [Message]
    3. Start within debug shell  [Off ]
    4. Program loading          [Disc & Card]
    5. Program forced write
    6. CD-ROM reading test
    7. HDD connect log


     <== back page    ==> next page
     SYSTEM Ver. : [BOOT]0.29 [OS]0.29
```

1. ERROR Log	Error log entry test (Refer to page 146 .) Displays an error log of the system software stored in the SRAM. A maximum of eight error logs can be displayed, starting with the latest error.
2. Change to display error	Error information switch (Refer to page 147 .) A display setting (for debugging) where an error occurs. A Message (message itself) or Information (error information) selection can be made.
3. Start within debug shell	Debug shell Start-up setting for the debug shell (for debugging). An Off (no initial start-up) or On (initial start-up) selection can be made.
4. Program loading	Program loading Setting the storage location priority for the system software and application at start-up (for debugging). A Disc (disc prioritized as boot source) or Disc & Card (disc or card prioritized as boot source) selection can be made.
5. Program forced write	Forced overwriting of the program Forced overwriting of SYS (system), GPS (GPS), APL (application) software, (and DSP software for Japanese domestic versions) are performed. For the system and application, the selection of a language is required (using the joystick). Pressing the BACK key will return the display to the menu screen.
6. CD-ROM reading test	CD-ROM reading test A reading test of the CD-ROM drive will be conducted.
7. HDD connect log	Not used.



```
TESTMODE MENU [SERVICE_MENU(OS)]
      1. GRP       BIOS check
      2. HDD       BIOS check
      3. AUDIO     BIOS check
      4. TELE      BIOS check
      5. GPS       BIOS check
      6. PCATA     BIOS check
      7. SYSTEM    BIOS check
      8. AVN       BIOS check
      9. TTS       BIOS check
     10. FLASH     BIOS check
   <== back page              ==> next page
      SYSTEM Ver. : [BOOT]0.29 [OS]0.29
```

This is the menu for performing hardware evaluations.
This menu is not used for service.



```
TESTMODE MENU [SERVICE_MENU(OS)]
11. VOICE     BIOS check
12. CDROM     BIOS check
13. ATAPI     BIOS check
14. GYRO SENSOR check
15. MODE CHANGE
16. MODE SET UP
17. MODE INITIALIZE
18. MS2       BIOS check
19. DSP       BIOS check
20. USB       BIOS check
    <== back page
SYSTEM Ver. : [BOOT]0.29 [OS]0.29
```

18. MS2 BIOS Check : Starting the DVD test mode. (Refer to pages 150)
The name of No.18 may be changed.

This is the menu for performing hardware evaluations.
This menu is not used for service (Except [No. 18]).

4. Test Mode's Menu Selection Method

A selection can be made while moving the joystick up or down the menu. When the desired item has been emphasized, press the OK button to execute the selected test.
This selection cannot be performed using the ten-key pad.
A transition between pages of the menu can be performed by moving the joystick to the left and right.

5. Version Information

The system software's version information is provided on the bottom line of the test mode menu.

SYSTEM Ver. : [BOOT] X.XX	ROM version = X.XX. No system software exists in an SDRAM.
SYSTEM Ver. : [BOOT] X.XX [OS] Y.YY	ROM version = X.XX. SDRAM version = Y.YY.

● Error Information

1. Error Information

Descriptions of error information, for errors arising from system software problems, will be provided in this section.
Up to eight sets of information, related to the system software's errors, will be stored in the SRAM.
By executing hi_sysdwn( ) the line number (on which the error occurred), the error code and detailed information of the error, will be stored in the error log.

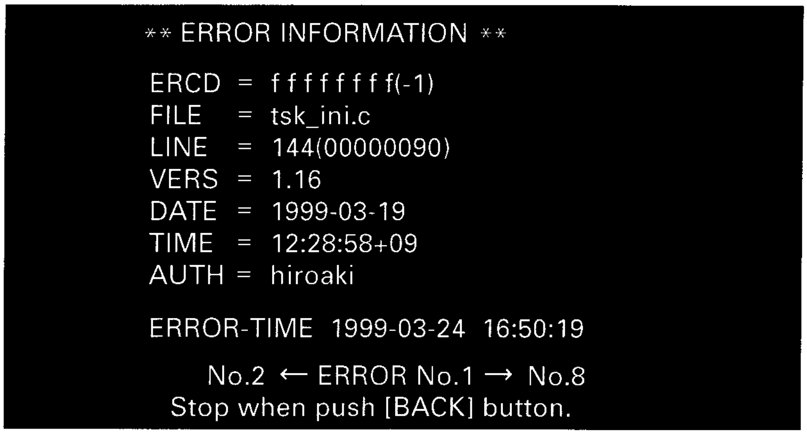
Hi_sysdwn( ) will be executed in the following two circumstances:

1. hi_sysdwn( ) will be intentionally stored if fatal errors occur with each BIOS.
2. If multiple exceptions, fatal exceptions, illegal command codes and trap command errors occur.

2. Error Log's Entry Function

Up to eight sets of information, related to errors starting with the latest error, will be displayed by the error log entry function.
There are two types of error log displays.
The display will vary when the argument provided to hi_sysdwn( ), depending on whether detailed information (such as program name, version number, creation date, creation time and creator name) exists or not.

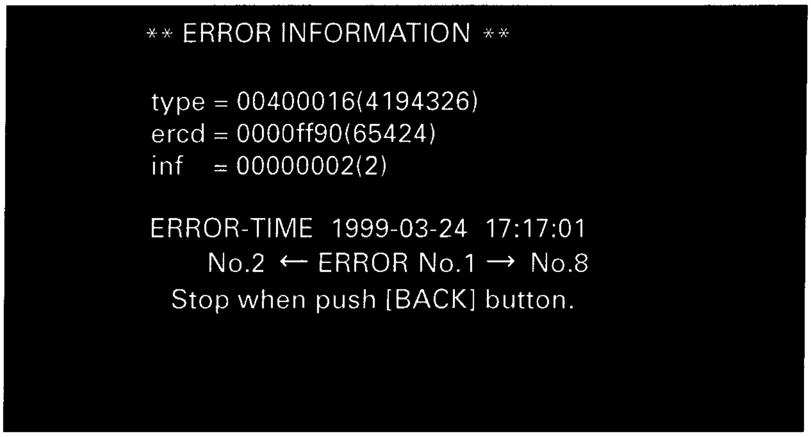
1. When detailed information exists:



```
        ** ERROR INFORMATION **

        ERCD  =  ffffffff(-1)
        FILE  =  tsk_ini.c
        LINE  =  144(00000090)
        VERS  =  1.16
        DATE  =  1999-03-19
        TIME  =  12:28:58+09
        AUTH  =  hiroaki

        ERROR-TIME  1999-03-24  16:50:19

            No.2 ← ERROR No.1 → No.8
          Stop when push [BACK] button.
```

ERCD	Error code.
FILE	Error occurring program name.
LINE	Error occurring program line number.
VERS	Error occurring program version number.
DATE	Error occurring program creation date.
TIME	Error occurring program creation time.
AUTH	Error occurring program creator name.
ERROR-TIME	Error occurrence date and time.

2. When detailed information does not exist:



```
** ERROR INFORMATION **

type = 00400016(4194326)
ercd = 0000ff90(65424)
inf  = 00000002(2)

ERROR-TIME  1999-03-24  17:17:01
     No.2 ← ERROR No.1 → No.8
  Stop when push [BACK] button.
```

type	Error occurring program line number.
ercd	Error code.
inf	System down information.
ERROR-TIME	Error occurrence date and time.

If an error occurs due to a multiple exception, the definitions will change to the following:

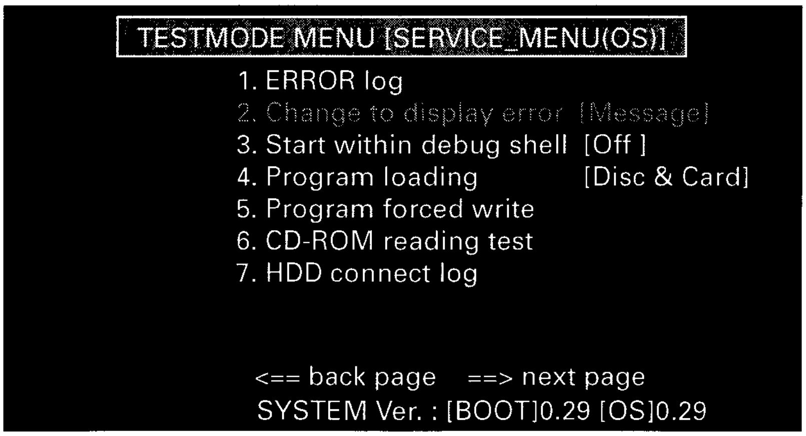
type	Execution address at the time of error occurrence.
ercd	Contributing factor for the exceptions.
inf	Program status word at the time of error occurrence.
ERROR-TIME	Error occurrence date and time.

3. Error Information Switch

The product (with default settings) will display error messages to the user if an error occurs.
Error information can be displayed if an error occurs by switching the error information in the test mode.
In either case, the error log entry display will be the same.

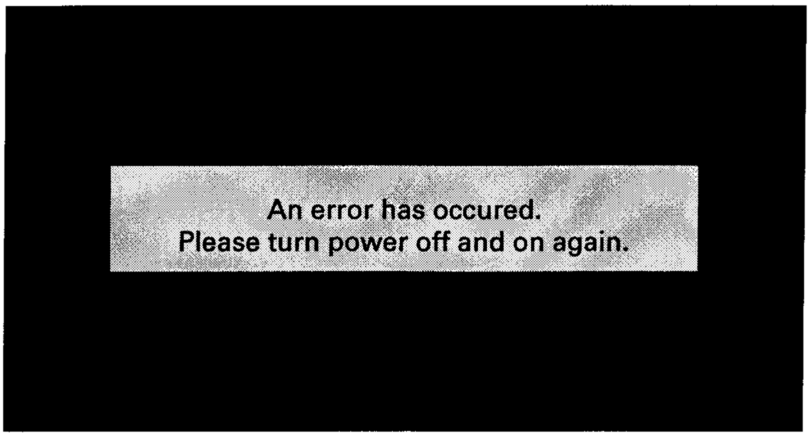
1) Error message display (default settings):

- Setting in the test mode:



```
TESTMODE MENU [SERVICE_MENU(OS)]
          1. ERROR log
          2. Change to display error  [Message]
          3. Start within debug shell  [Off ]
          4. Program loading          [Disc & Card]
          5. Program forced write
          6. CD-ROM reading test
          7. HDD connect log


           <== back page    ==> next page
           SYSTEM Ver. : [BOOT]0.29 [OS]0.29
```

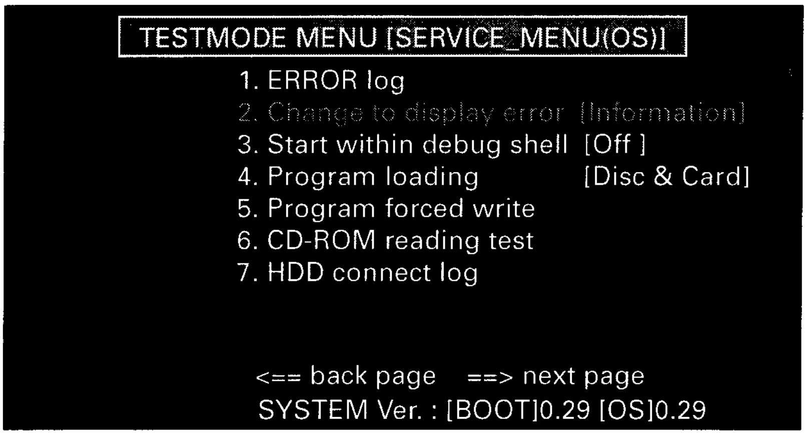
- Display when an error occurs:



```
An error has occured.
Please turn power off and on again.
```

2) Error information display

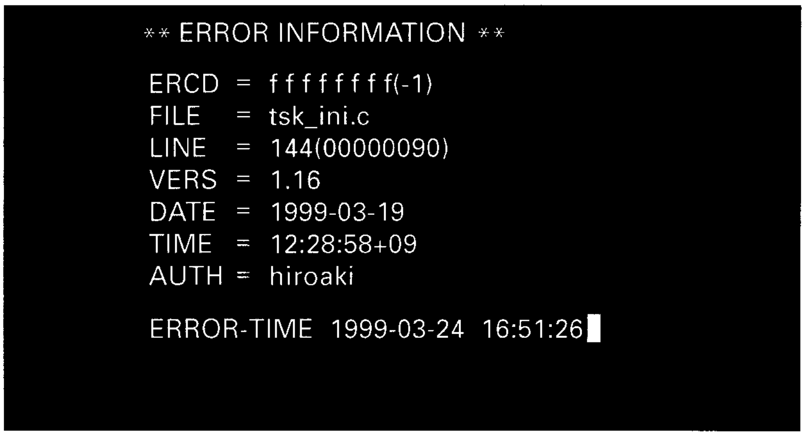
- Settings in the test mode:



```
TESTMODE MENU [SERVICE_MENU(OS)]
     1. ERROR log
     2. Change to display error  [Information]
     3. Start within debug shell  [Off ]
     4. Program loading          [Disc & Card]
     5. Program forced write
     6. CD-ROM reading test
     7. HDD connect log


      <== back page    ==> next page
      SYSTEM Ver. : [BOOT]0.29 [OS]0.29
```

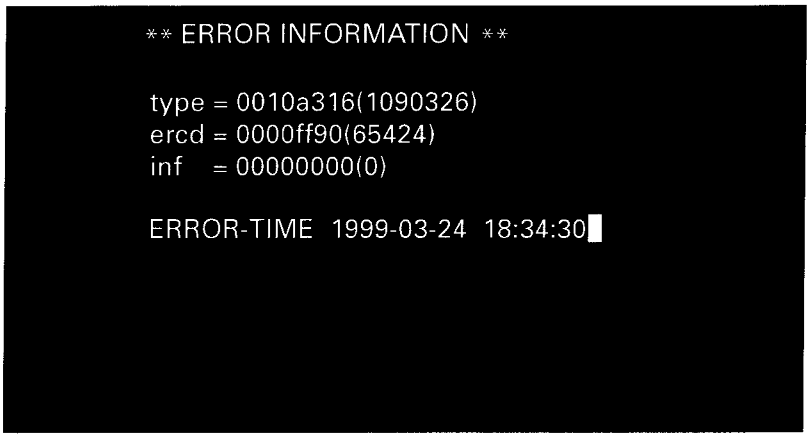
Display when an error occurs:

- If error information exists:



```
** ERROR INFORMATION **

ERCD  =  ffffffff(-1)
FILE  =  tsk_ini.c
LINE  =  144(00000090)
VERS  =  1.16
DATE  =  1999-03-19
TIME  =  12:28:58+09
AUTH  =  hiroaki

ERROR-TIME  1999-03-24  16:51:26
```

- If error information does not exist:



```
** ERROR INFORMATION **

type = 0010a316(1090326)
ercd = 0000ff90(65424)
inf  = 00000000(0)

ERROR-TIME  1999-03-24  18:34:30█
```

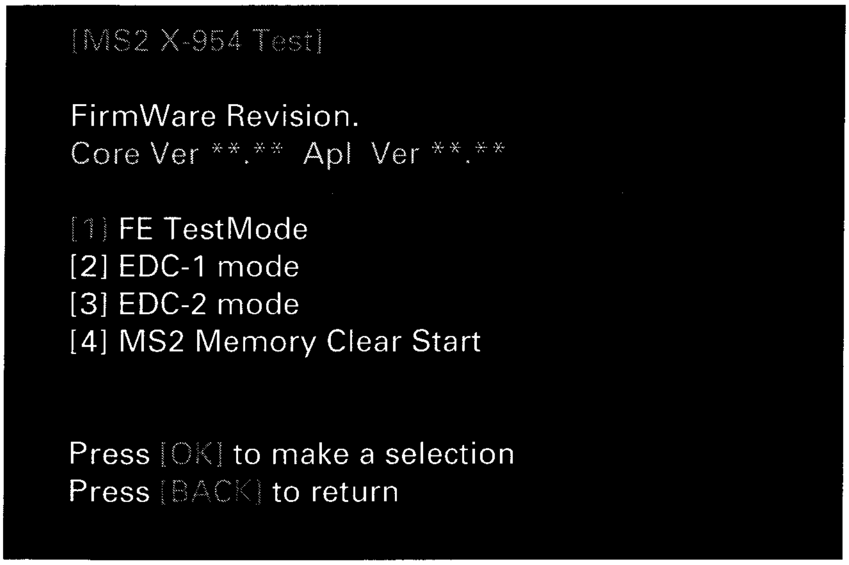
● DVD Test Modes

CAUTIONS
Protection is not operational against a mechanical runaway conditions during servo testing,.
Critical damage can result if the system is allowed to continue in a mechanical runaway state.
If abnormal noise is heard during the test, turn the power OFF immediately.

● Entering the test mode
The test mode can be selected from the navigation test mode (please refer to pages 141and 145).

● Keys (remote control) used for the DVD test mode
[OK] : Selection decided.
[BACK] : Go back.
Directional keys : [← ↓ → ↑] keys of the joystick.

(1) Initial screen display



[MS2 X-954 Test]

FirmWare Revision.
Core Ver **.** Apl Ver **.**

[1] FE TestMode
[2] EDC-1 mode
[3] EDC-2 mode
[4] MS2 Memory Clear Start

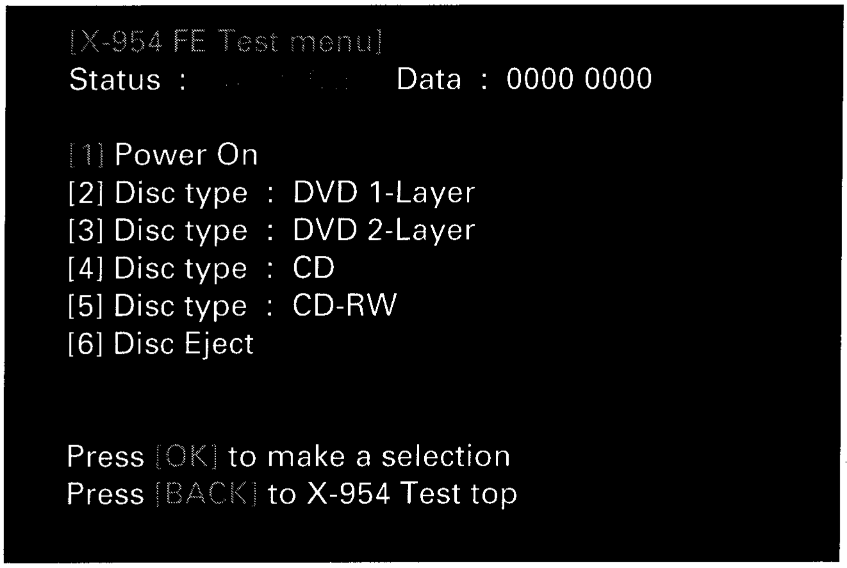
Press [OK] to make a selection
Press [BACK] to return

FirmWare Revision: Version of the drive used.

[1]	Starts the FE test mode.
[2]	EDC1 mode (available for DVDs only).
[3]	EDC2 mode (available for DVDs only).
[4]	Executes the MS2 memory clearing operation.
[OK]	Executes.
[BACK]	Returns to the test mode menu.

* Using the joystick select individual items .

(2) FE Test Menu Screen Display

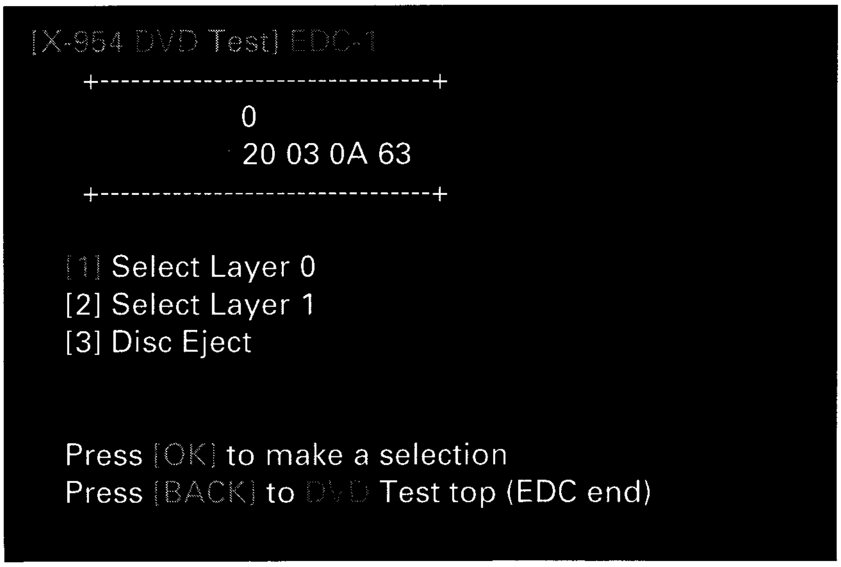


```
[X-954 FE Test menu]
Status :  [illegible]     Data  :  0000 0000

[1] Power On
[2] Disc type  :  DVD 1-Layer
[3] Disc type  :  DVD 2-Layer
[4] Disc type  :  CD
[5] Disc type  :  CD-RW
[6] Disc Eject


Press [OK] to make a selection
Press [BACK] to X-954 Test top
```

Status :	"Power Off (during normal conditions)."
[1]	Power On (proceed to servo test 1-0).
[2]	Disk type : DVD single-layer.
[3]	Disk type : DVD double-layer.
[4]	Disk type : CD.
[5]	Disk type : CD-RW.
[6]	Ejects the disk.
[OK]	Executes.
[BACK]	Returns to the initial screen display for the test.

* Using the joystick select individual items .

(3) DVD EDC Test Menu Screen Display



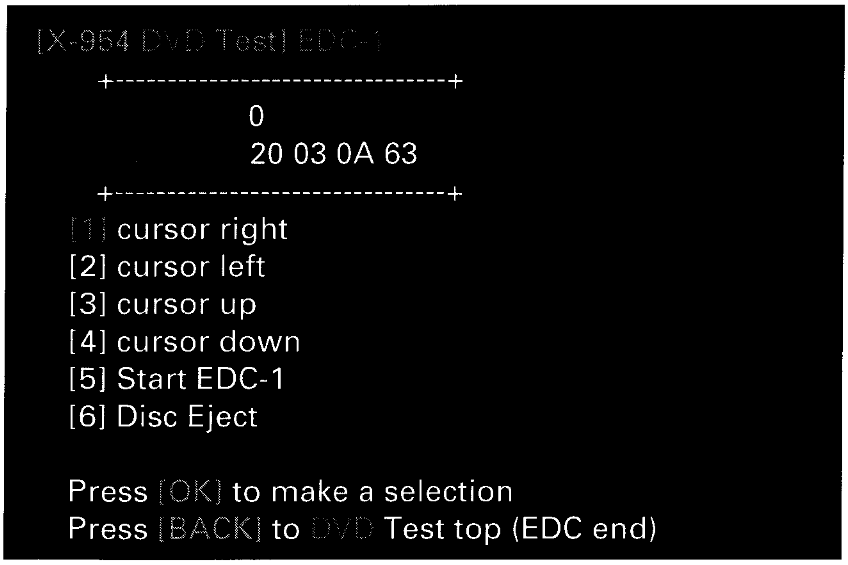
```
[X-954 DVD Test] EDC-1
   +--------------------------------+
                0
                20 03 0A 63
   +--------------------------------+

 [1] Select Layer 0
 [2] Select Layer 1
 [3] Disc Eject


 Press [OK] to make a selection
 Press [BACK] to DVD Test top (EDC end)
```

EDC-1 : Performs consecutive EDC tests.
EDC-2 : Performs EDC tests for each block.
ID : Performs ID of the test.

[1]	Selects layer 0.
[2]	Selects layer 1.
[3]	Ejects the disk.
[OK]	Executes.
[BACK]	Returns to the test mode menu.

* Using the joystick select individual items .

(4) DVD ECD Test Menu Screen Display

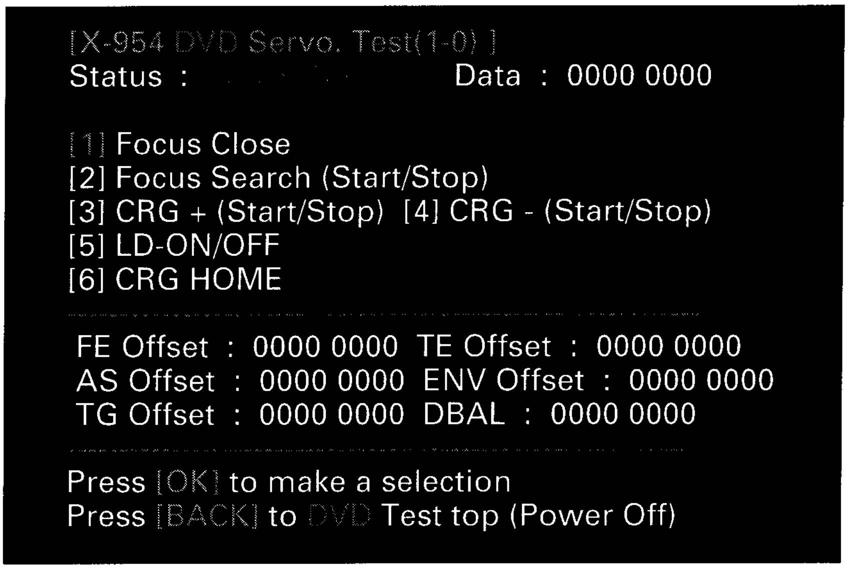


```
[X-954 DVD Test] EDC-1
    +------------------------------+
                0
                20 03 0A 63
    +------------------------------+
  [1] cursor right
  [2] cursor left
  [3] cursor up
  [4] cursor down
  [5] Start EDC-1
  [6] Disc Eject

  Press [OK] to make a selection
  Press [BACK] to DVD Test top (EDC end)
```

EDC-1 : Performs consecutive EDC tests.
EDC-2 : Performs EDC tests for each block.
ID : Performs ID of the test.

[1]	Moves the cursor to the right by one increment.
[2]	Moves the cursor to the left by one increment.
[3]	Moves the cursor up by one increment.
[4]	Moves the cursor down by one increment.
[5]	Starts the EDC test.
[6]	Ejects the disk.
[OK]	Executes.
[BACK]	Returns to the test mode menu.

(5) Servo Test Screen Display 1-0



```
[X-954 DVD Servo. Test(1-0) ]
Status :                      Data  :  0000 0000

[1] Focus Close
[2] Focus Search (Start/Stop)
[3] CRG + (Start/Stop)  [4] CRG - (Start/Stop)
[5] LD-ON/OFF
[6] CRG HOME

 FE Offset  :  0000 0000  TE Offset  :  0000 0000
 AS Offset  :  0000 0000  ENV Offset  :  0000 0000
 TG Offset  :  0000 0000  DBAL  :  0000 0000

Press [OK] to make a selection
Press [BACK] to DVD Test top (Power Off)
```

Test items are basically the same for both DVDs and CDs.

* Using the joystick select individual items.

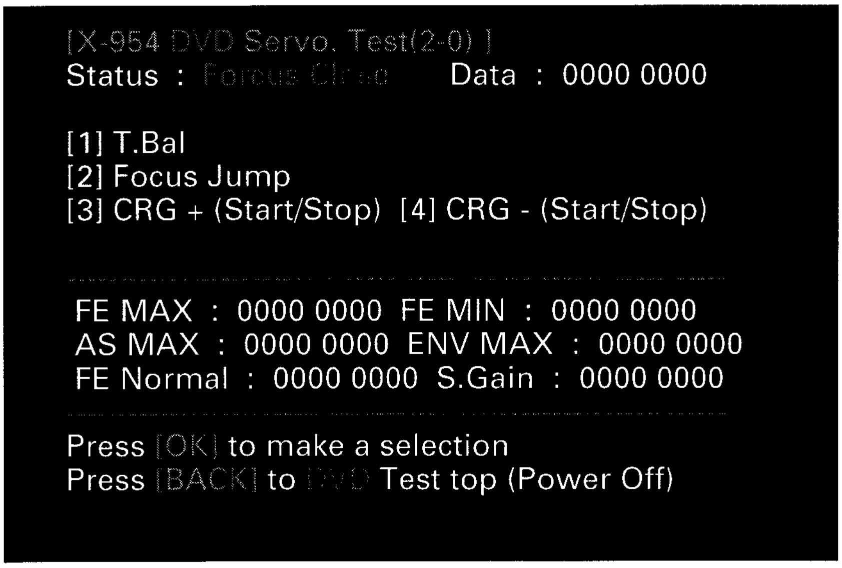
Status : "Power On" (during normal conditions).

* Focus closing and searching will not operate unless the LD-ON setting is made.

[1] Closes in on the focus (proceeds to servo test 2-0).
[2] Performs a focus search operation (S-curve measurement). Focus operation will then be stopped.
[3] Moves the carriage (external). The carriage transition operation will then be stopped.
[4] Moves the carriage (internal). The carriage transition operation will then be stopped.
[5] Performs LD-ON/OFF operation.
[6] Returns the carriage to the home position.
[BACK] Returns to the DVD test menu screen display.

* This operation will not be performed until the coefficient figures have been received.

(6) Servo Test Screen Display 2-0

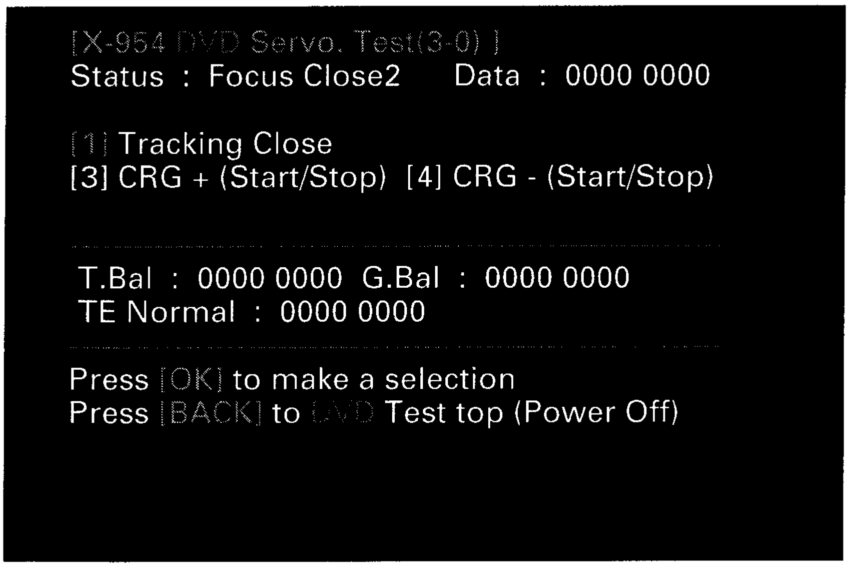


```
[X-954 DVD Servo. Test(2-0) ]
Status :  Focus Close         Data  :  0000 0000

[1] T.Bal
[2] Focus Jump
[3] CRG + (Start/Stop)  [4] CRG - (Start/Stop)


 FE MAX  :  0000 0000  FE MIN  :  0000 0000
 AS MAX  :  0000 0000  ENV MAX  :  0000 0000
 FE Normal  :  0000 0000  S.Gain  :  0000 0000

Press [OK] to make a selection
Press [BACK] to DVD Test top (Power Off)
```

Test items are basically the same for both DVDs and CDs.
* Using the joystick select individual items.
Status : "Focus Close" (during normal conditions).

[1] Adjusts tracking balance (proceeds to servo test 3-0).
[2] Performs a focus jump operation.
[3] Moves the carriage (external). The carriage transition operation will then be stopped.
[4] Moves the carriage (internal). The carriage transition operation will then be stopped.
[BACK] Returns to the DVD test menu screen display.
* This operation will not be performed until the coefficient figures have been received.

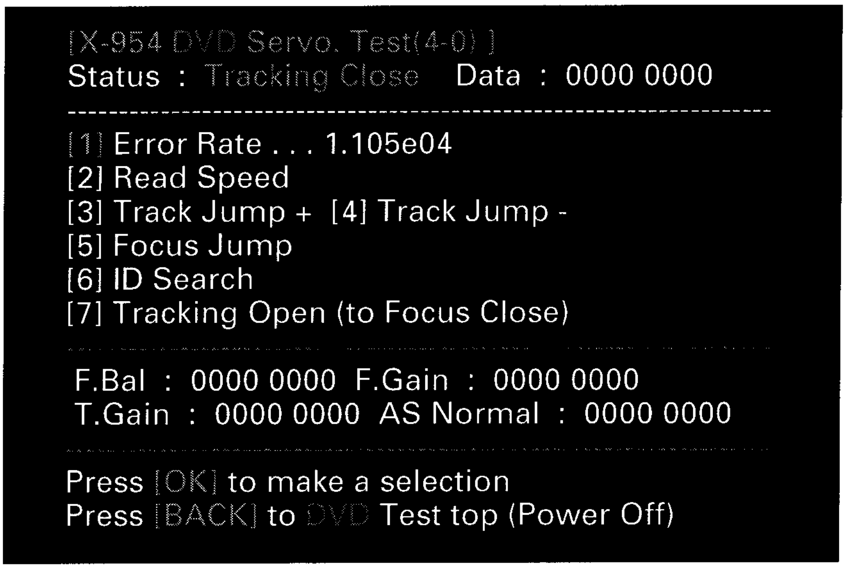
(7) Servo Test Screen Display 3-0



```
[X-954 DVD Servo. Test(3-0) ]
Status : Focus Close2     Data : 0000 0000

[1] Tracking Close
[3] CRG + (Start/Stop)  [4] CRG - (Start/Stop)

 T.Bal : 0000 0000  G.Bal : 0000 0000
 TE Normal : 0000 0000

Press [OK] to make a selection
Press [BACK] to DVD Test top (Power Off)
```

Test items are basically the same for both DVDs and CDs.
* Using the joystick select individual items.
Status : "Focus Close2" (during normal conditions).
[1] Performs tracking close operation (proceeds to servo test 4-0).
[3] Moves the carriage (external). The carriage transition operation will then be stopped.
[4] Moves the carriage (internal). The carriage transition operation will then be stopped.
[BACK] Returns to the DVD test menu screen display.
* This operation will not be performed until the coefficient figures have been received.

(8) Servo Test Screen Display 4-0



```
[X-954 DVD Servo. Test(4-0) ]
Status : Tracking Close    Data : 0000 0000
------------------------------------------------------------
[1] Error Rate . . . 1.105e04
[2] Read Speed
[3] Track Jump +  [4] Track Jump -
[5] Focus Jump
[6] ID Search
[7] Tracking Open (to Focus Close)

 F.Bal : 0000 0000  F.Gain : 0000 0000
 T.Gain : 0000 0000  AS Normal : 0000 0000

Press [OK] to make a selection
Press [BACK] to DVD Test top (Power Off)
```

Test items are basically the same for both DVDs and CDs.

* Using the joystick select individual items.

Status : "Tracking Close" (during normal conditions).

[1] [OK] triggers measurement of the error rates (other operations can not be performed for approximately 10 seconds).

[2] [OK] triggers switching of the reproduction speed.

[3] Performs track jumping by a designated number of tracks (external).

[4] Performs track jumping by a designated number of tracks (internal).

[5] Performs a focus jump operation (for DVDs only).

[6] Designates an ID (for DVDs only).

[7] Performs a tracking open operation (for the focus close status: will proceed to servo test 2-0).

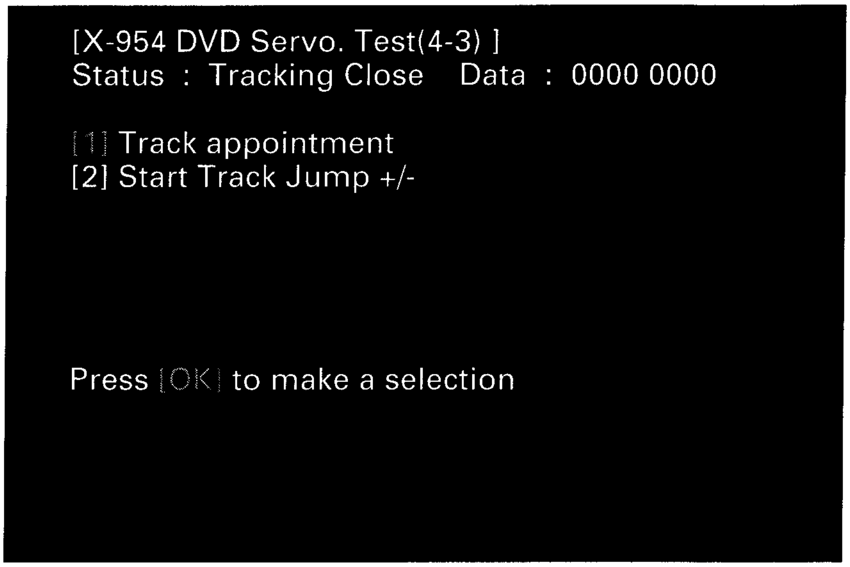
[BACK] Returns to the DVD test menu screen display.

* This operation will not be performed until the coefficient figures have been received.

Reproduction speeds

L0-layer	DVD x CAV, CD x 2CLV	4000 0000
L0-layer	DVD x 1CLV, CD x 1CLV	4200 0000
L1-layer	DVD x CAV	4100 0000
L1-layer	DVD x 1CLV	4300 0000

(9) Servo Test Screen Display 4-3/4

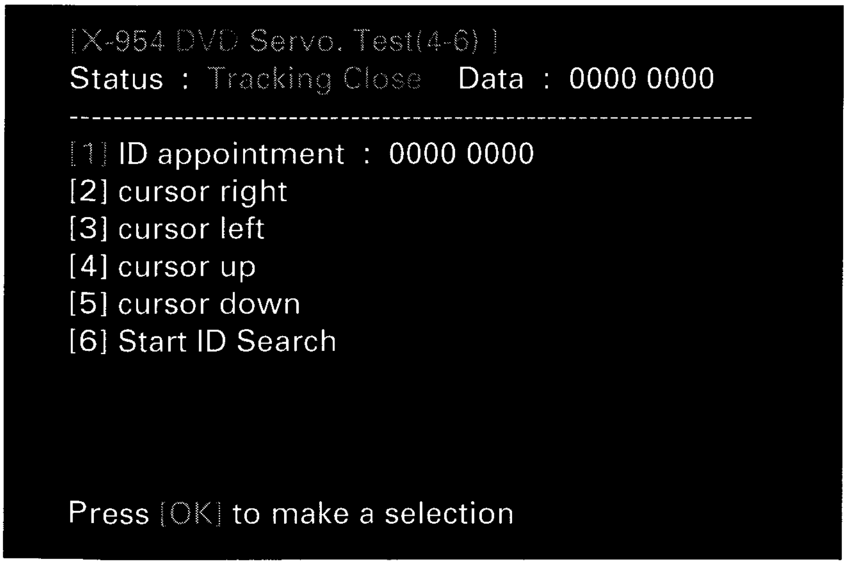


```
[X-954 DVD Servo. Test(4-3) ]
Status : Tracking Close    Data : 0000 0000

[1] Track appointment
[2] Start Track Jump +/-



Press [OK] to make a selection
```

Test items are basically the same for both DVDs and CDs.

Status : "Tracking Close" (during normal conditions).
[1] Performs a track number designation (MS2 cyclically switches the ten available patterns).
[2] Starts the tracking jump operation (will proceed to servo test 4-0).

(10) Servo Test Screen Display 4-6



```
[X-954 DVD Servo. Test(4-6) ]
Status : Tracking Close    Data : 0000 0000
-------------------------------------------------------------
[1] ID appointment : 0000 0000
[2] cursor right
[3] cursor left
[4] cursor up
[5] cursor down
[6] Start ID Search


Press [OK] to make a selection
```

Available for DVDs only.
Status : "Tracking Close" (during normal conditions).
[1] Displays designated ID .
[2] Moves the cursor to the right by one increment.
[3] Moves the cursor to the left by one increment.
[4] Moves the cursor up by one increment.
[5] Moves the cursor down by one increment.
[6] Starts the ID search operation (return to servo test 4-0).

7.1.2 USING THE TEST DISC

● TEST DISC Part No. : GGV1059 (CNDK-LT0102)

1. Start up

Insert the test disc into the system, and press the [BACK] key while the title, "AVIC-9DVD/EW, AVIC-9DVD/UC and AVIC-8DVD/EW TEST DISC" is displayed. This will bring up the menu screen.
If keys are not pressed while the title is displayed, the initial screen of the line testing will be displayed.

2. Key Operations

- Line testing screen display
    1. To switch between the testing screen and menu screen displays press the [CR] key.
    2. To test a selected item press the [BACK] key.
    3. To revert to the previous screen press the [↑] key.
    4. To move to the next test screen press the [↓] key (the display will not change to the next screen, unless the test has been completed successfully).

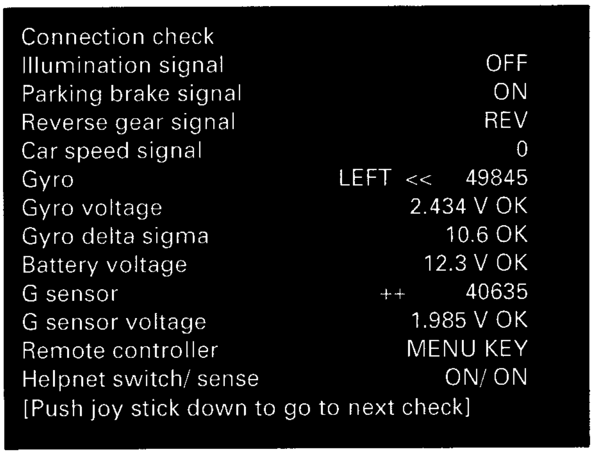
* For details please refer to descriptions for each screen.

- Menu screen for service
    1. Select an item by using the [↑] and [↓] keys, then press the [CR] key to display the test screen.
    2. To return to the menu screen press the [BACK] key.

* For details please refer to descriptions on each screen.

3. Test Screen Display

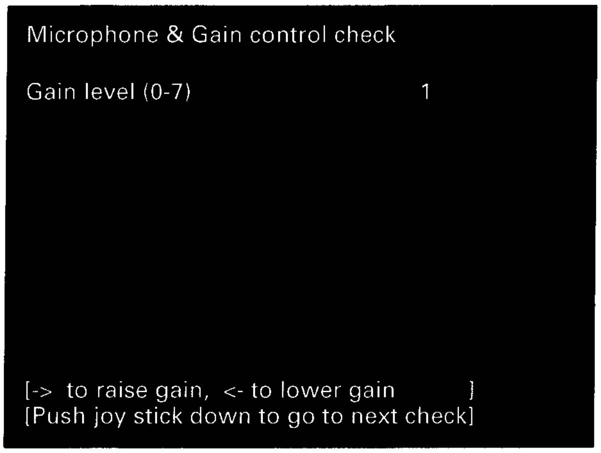
1. External Connections



```
Connection check
Illumination signal                     OFF
Parking brake signal                     ON
Reverse gear signal                     REV
Car speed signal                          0
Gyro                       LEFT  <<   49845
Gyro voltage                    2.434 V OK
Gyro delta sigma                   10.6 OK
Battery voltage                  12.3 V OK
G sensor                      ++      40635
G sensor voltage                1.985 V OK
Remote controller                MENU KEY
Helpnet switch/ sense               ON/ ON
[Push joy stick down to go to next check]
```

- Status of items listed on the left will be updated every second.
- The VCUE (Pin-9) line will be turned ON during the test.
- The status of the Illumination, Parking Brake and Reverse Gear must change between ON and OFF.
- Pressing the [↓] key will not enable the test to proceed to the next test unless all conditions have been satisfied.

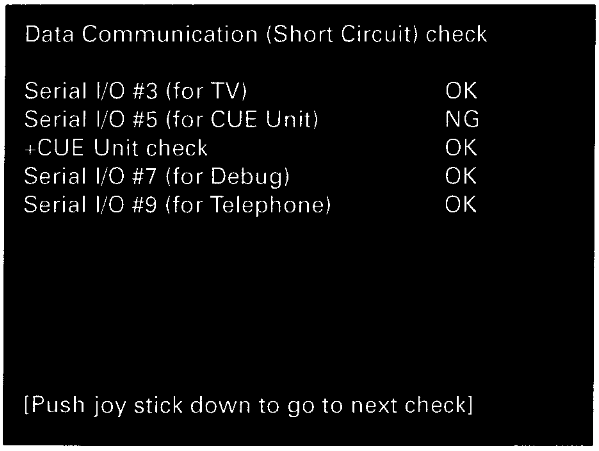
2. Call Origination Microphone Line (Voice Recognition)



```
Microphone & Gain control check

Gain level (0-7)                    1




[-> to raise gain, <- to lower gain        ]
[Push joy stick down to go to next check]
```

- Voice recognition will be performed and the microphone and speaker line's connectivity tests will be conducted.
  Please input a voice signal in MICIN to verify the voice recognition's function, operation and input level.
  The gain of PROGGAIN0 through PROGGAIN2 can be increased or decreased by using the [→] and [←] of the joystick.
- Enable and disable muting of the ONSEIMUTE signal by using the Current Position key as a toggle switch.
- The next test can be performed by pressing the [↓] key.

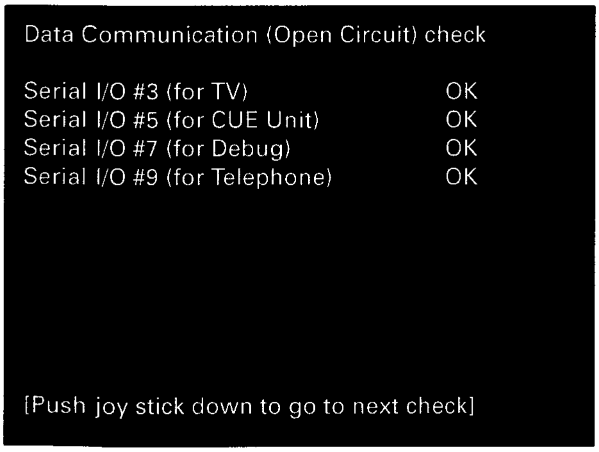
3. Data Communications (Short Circuit Checks)



```
Data Communication (Short Circuit) check

Serial I/O #3 (for TV)                OK
Serial I/O #5 (for CUE Unit)          NG
+CUE Unit check                       OK
Serial I/O #7 (for Debug)             OK
Serial I/O #9 (for Telephone)         OK




[Push joy stick down to go to next check]
```

- CUE connection will be checked for short circuits. If the CUE is not connected a loop-back check at CH5 will be performed.
  If the CUE connectivity or CH5 loop-back check results in an OK, the CH5 test will be successfully completed (OK).
- The SIO #1, #6 and ETC checks, will be skipped.
- If all tests result in an OK the next test can be performed by using the [↓] key.

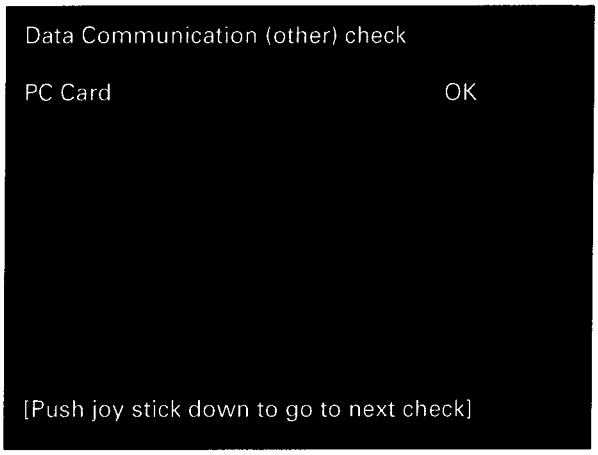
4. Data Communications (Open Circuit Checks)



```
Data Communication (Open Circuit) check

Serial I/O #3 (for TV)                OK
Serial I/O #5 (for CUE Unit)          OK
Serial I/O #7 (for Debug)             OK
Serial I/O #9 (for Telephone)         OK




[Push joy stick down to go to next check]
```

- The SIO connection is checked for open circuits. Please do not connect anything to the pins. If the circuit is determined to be open, the test will result in an OK for each SIO connection.
- The next test can be performed using the [↓] key, if all tests result in OK.

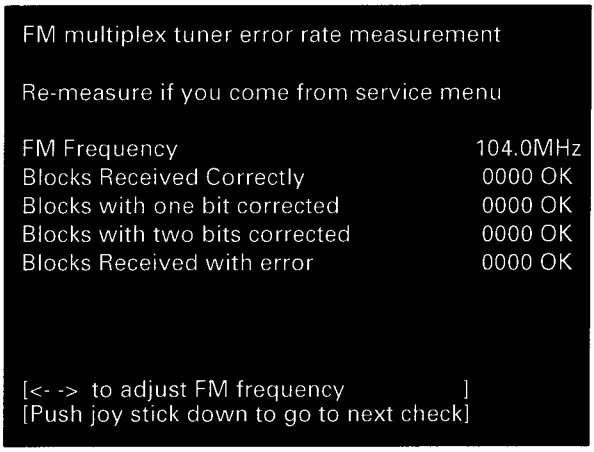
5. Data Communications (Others)



```
Data Communication (other) check

PC Card                                OK




[Push joy stick down to go to next check]
```

- PC card connection is checked.
- The next test can be performed by pressing the [↓] key, if all tests result in OK.

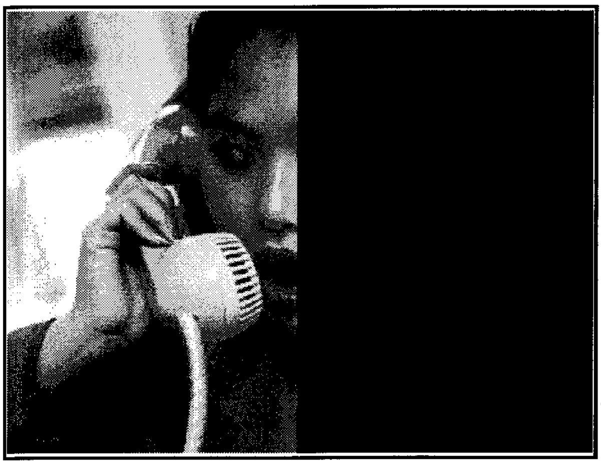
6. FM Multiplex Error Measurements



```
FM multiplex tuner error rate measurement

Re-measure if you come from service menu

FM Frequency                          104.0MHz
Blocks Received Correctly              0000 OK
Blocks with one bit corrected          0000 OK
Blocks with two bits corrected         0000 OK
Blocks Received with error             0000 OK



[<- -> to adjust FM frequency           ]
[Push joy stick down to go to next check]
```

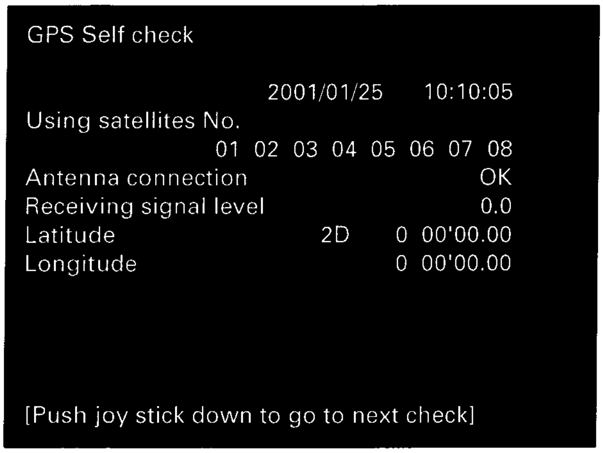
- FM multiplex error measurement is conducted.
- The default frequency is 104.0MHz.
- If the test is performed for the first time, measurements (taken at the time the test disk is started up) will be displayed.
- Please set the frequency to a frequency other than the frequency used in the previous test for all tests following the second test.
- The frequency can be changed by using the [←] and [→] keys after taking a measurement.
- 500 blocks will be tested, and if the error rate is 1% or less, the results will be displayed as "OK".
- The next test can be performed by pressing the [↓] key, if the test results in an OK.

7. Natural Image and Navigator P-side-P



- A 256-color natural image will be displayed as a background image, and the right half of the image will be changed to a chroma key color.
- The 1kHz sine wave, with a sampling rate of 22kHz, will be output for 30 seconds.
- If the test screen is displayed, turn the guidance audio ON, then turn it OFF when the screen is no longer displayed.
- The sound volume can be altered by pressing the [←] and [→] keys (from level 0 to 9).
  [JPEG file name: HITO1.JPG]
  [audio file name: A19K01KR.WAV]
- The next test can be performed using the [↓] key.

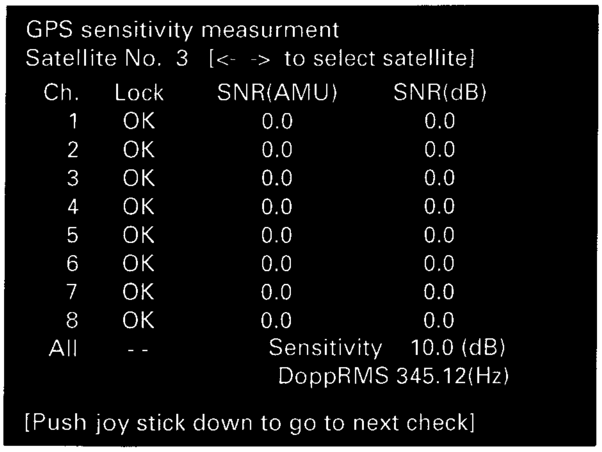
8. GPS Reception



```
GPS Self check

                    2001/01/25     10:10:05
Using satellites No.
                  01 02 03 04 05 06 07 08
Antenna connection                       OK
Receiving signal level                  0.0
Latitude                 2D     0 00'00.00
Longitude                        0 00'00.00




[Push joy stick down to go to next check]
```

- The status of the GPS reception will be displayed.
- Verification is made to ensure that the antenna connection is OK and that the latitude and longitude measurements are 1 degrees or more, resulting in a three-dimensional binary measurement. If these conditions have been verified to satisfy the requirements, the process can proceed to the next step.
- The next test can be performed by pressing the [↓] key.

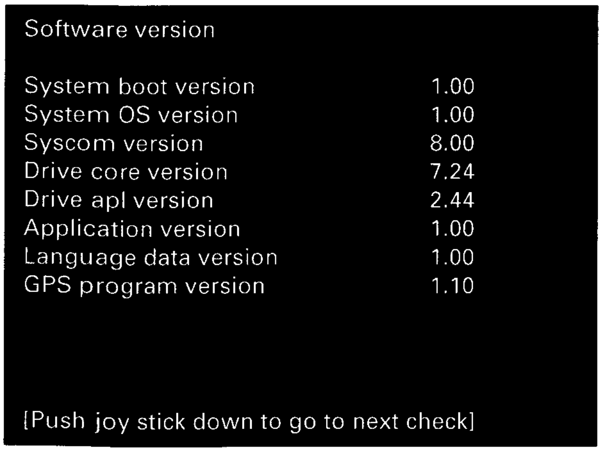
9. GPS Sensitivity Measurements



```
GPS sensitivity measurment
Satellite No. 3  [<- -> to select satellite]
 Ch.   Lock     SNR(AMU)        SNR(dB)
   1    OK        0.0             0.0
   2    OK        0.0             0.0
   3    OK        0.0             0.0
   4    OK        0.0             0.0
   5    OK        0.0             0.0
   6    OK        0.0             0.0
   7    OK        0.0             0.0
   8    OK        0.0             0.0
  All   - -       Sensitivity    10.0 (dB)
                   DoppRMS 345.12(Hz)

[Push joy stick down to go to next check]
```

- The sensitivity of the GPS selected by the [CR] key will be displayed.
- The GPS selection can be changed by pressing the [←] and [→] keys.
- The next test can be performed by pressing the [↓] key.

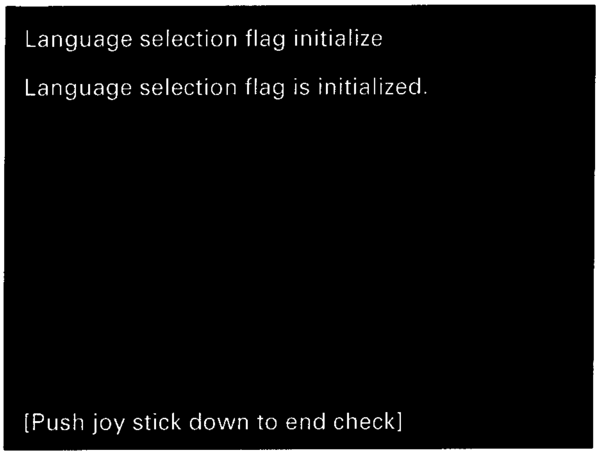
10. Software Version Display



```
Software version

System boot version               1.00
System OS version                 1.00
Syscom version                    8.00
Drive core version                7.24
Drive apl version                 2.44
Application version               1.00
Language data version             1.00
GPS program version               1.10




[Push joy stick down to go to next check]
```

- The software version will be displayed.
- The next test can be performed by pressing the [↓] key.

11. Language Selection Flag Initialization



Language selection flag initialize

Language selection flag is initialized.

[Push joy stick down to end check]

- Settings will be reset to the shipping conditions upon entering into this test stage (no settings).
- Settings will be performed at the time this test starts.
- The [↓] key will terminate the production engineering test.

4. Menus for Service

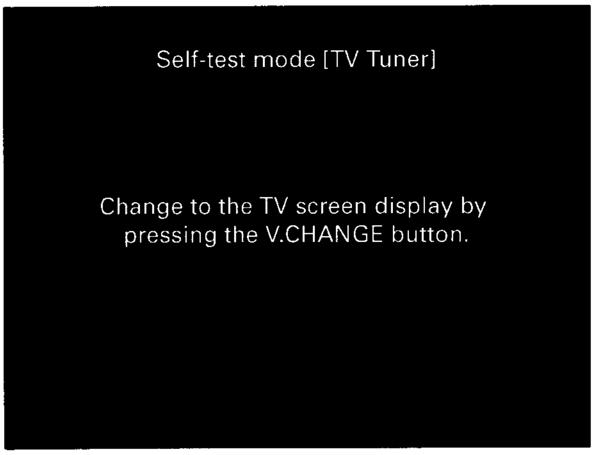
1. Display Image RGB

- This is a test for the RGB image display.
- The display can be switched by pressing the [←] and [→] keys.

* An RGB image display is performed in the order of R100% -> R50% -> G100% -> G50% -> B100% -> B50%.

- A total of six screen images will be displayed.

2. TV Tuner

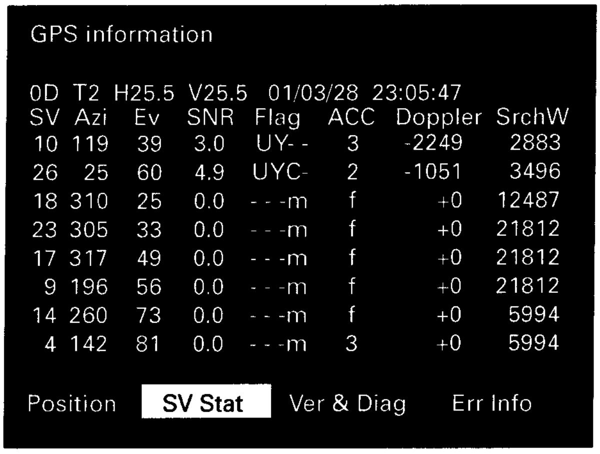


Self-test mode [TV Tuner]

Change to the TV screen display by pressing the V.CHANGE button.

- The display can be switched to the TV screen display by pressing the V.CHANGE button.
- Channels can be switched between 1, 8, 12, 13, 39 and 62 by using the up and down motion of the joystick.
- Turning and holding the joystick to the right or left causes the seek action to go up or down.
- Turning the joystick quickly to the right or left will cause the manual channel to scroll up or down.

3. GPS Information

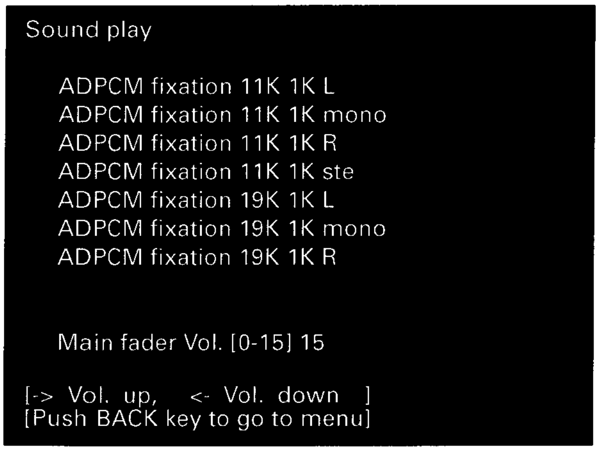


```
GPS information

0D  T2  H25.5  V25.5   01/03/28  23:05:47
SV  Azi   Ev   SNR   Flag   ACC   Doppler  SrchW
 10  119   39   3.0   UY- -    3     -2249    2883
 26   25   60   4.9   UYC-     2     -1051    3496
 18  310   25   0.0   - - -m   f        +0   12487
 23  305   33   0.0   - - -m   f        +0   21812
 17  317   49   0.0   - - -m   f        +0   21812
  9  196   56   0.0   - - -m   f        +0   21812
 14  260   73   0.0   - - -m   f        +0    5994
  4  142   81   0.0   - - -m   3        +0    5994

Position   SV Stat   Ver & Diag    Err Info
```

- If the cursor is over the "Position" and the [CR] key is pressed, the "Position Information" will be displayed.
- If the cursor is over the "SV Stat" and the [CR] key is pressed, the "Status Information" will be displayed.
- If the cursor is over the "Ver&Diag" and the [CR] key is pressed, the "Dialog Information" will be displayed.
- If the cursor is over the "Err Info" and the [CR] key is pressed, the "Error Information" will be displayed.

(The screen displayed shown here represent pressing the [CR] key when the cursor will be over the "SV Stat.")

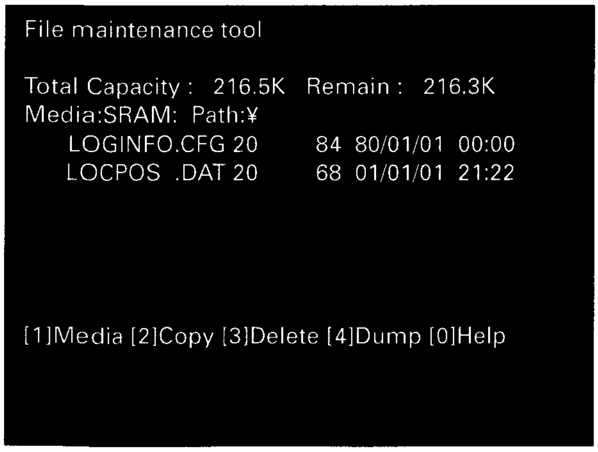
4. Audio Reproduction



```
Sound play

    ADPCM fixation 11K 1K L
    ADPCM fixation 11K 1K mono
    ADPCM fixation 11K 1K R
    ADPCM fixation 11K 1K ste
    ADPCM fixation 19K 1K L
    ADPCM fixation 19K 1K mono
    ADPCM fixation 19K 1K R


    Main fader Vol. [0-15] 15

[-> Vol. up,    <- Vol. down   ]
[Push BACK key to go to menu]
```

- The audio selected by the [CR] key will be reproduced.
- The audio selection can be changed by using the [←] and [→] keys.

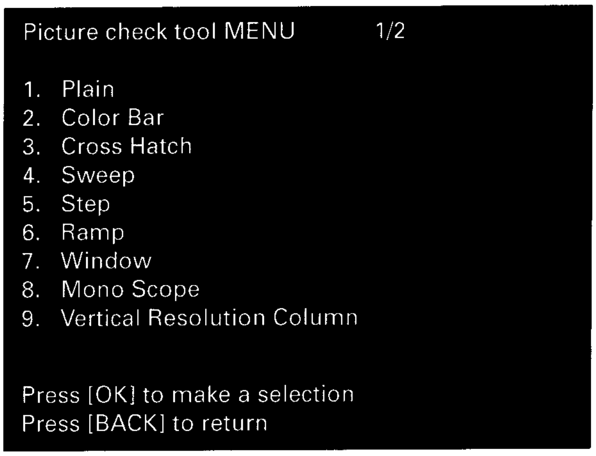
5. File Management



```
File maintenance tool

Total Capacity :  216.5K   Remain :  216.3K
Media:SRAM:  Path:¥
     LOGINFO.CFG 20        84  80/01/01  00:00
     LOCPOS  .DAT 20       68  01/01/01  21:22




[1]Media [2]Copy [3]Delete [4]Dump [0]Help
```

- The copying, deleting and dumping of files can be performed. Please refer to the HELP for details concerning the use of individual functions.

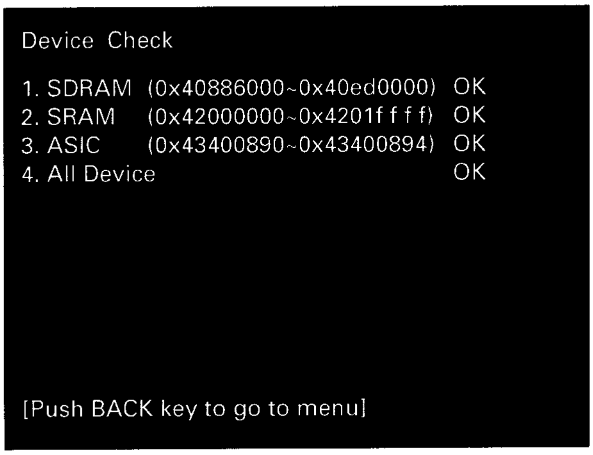
6. Display Image Check



```
Picture check tool MENU          1/2

1.  Plain
2.  Color Bar
3.  Cross Hatch
4.  Sweep
5.  Step
6.  Ramp
7.  Window
8.  Mono Scope
9.  Vertical Resolution Column


Press [OK] to make a selection
Press [BACK] to return
```

1. Plain
... White, yellow, light blue, green, purple, red and blue are displayed by using the [←] and [→] keys.
2. Color bar
... These are white, yellow, light blue, green, purple, red and blue, from left to right.
3. Cross hatch
4. Sweep
5. Step
6. Ramp
7. Window
8. Monoscope
9. Frequency line
10. Horizontal stripe 1
11. Horizontal stripe 2
12. Japanese Kanji character pattern
13. Map (map.jpg)
14. Natural image (nature.jpg)
15. Portrait 1 (hito1.jpg)
16. Portrait 2 (hito2.jpg)

7. Device Check (for technical purposes only)



```
Device  Check

1. SDRAM  (0x40886000~0x40ed0000)  OK
2. SRAM   (0x42000000~0x4201f f f f)  OK
3. ASIC   (0x43400890~0x43400894)  OK
4. All Device                      OK




[Push BACK key to go to menu]
```

- The devices listed to the left are tested for technical purposes only.
- Selections are made by pressing the [↓] and [↑] keys, and then by pressing the [CR] key.
- If the test pattern is selected, the test will start.

7.1.3 DISASSEMBLY

● **Removing the Case (not shown)**

1. Remove the screw and then remove the Case.

● **Removing the DVD Mechanism Module (Fig.1)**

1 Remove the four screws.

Disconnect the connector and then remove the DVD Mechanism Module.

● **Removing the Interface PCB (Fig.1)**

2 Remove the two screws.

3 Remove the two screws.

Disconnect the connector and then remove the Interface PCB.

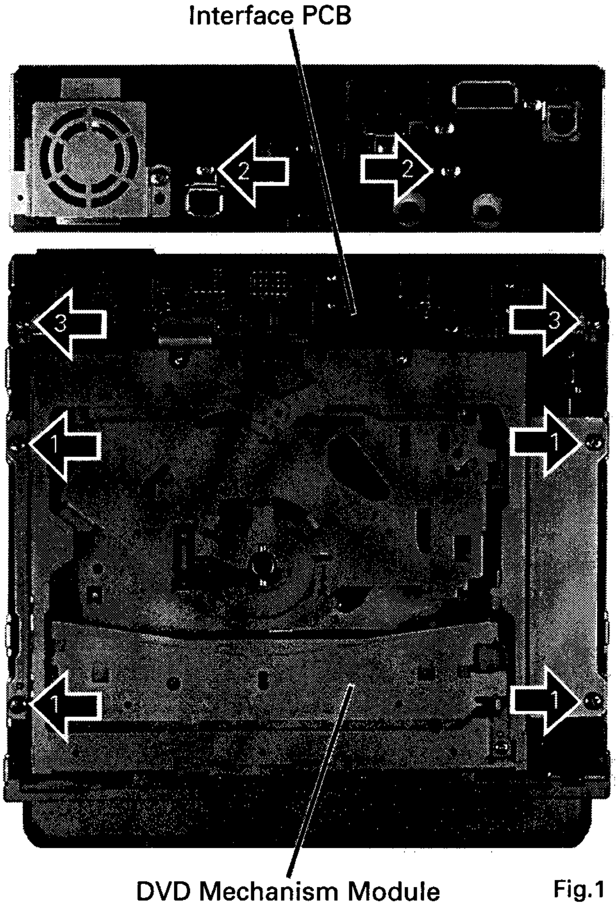


Fig.1

● **Removing the Grille Assy (not shown)**

1. Remove the Grille Assy.

● **Removing the CC Unit (Fig.2)**

1 Remove the solder and then straight the tab at location indicated.

2 Remove the three screws and then remove the CC Unit.

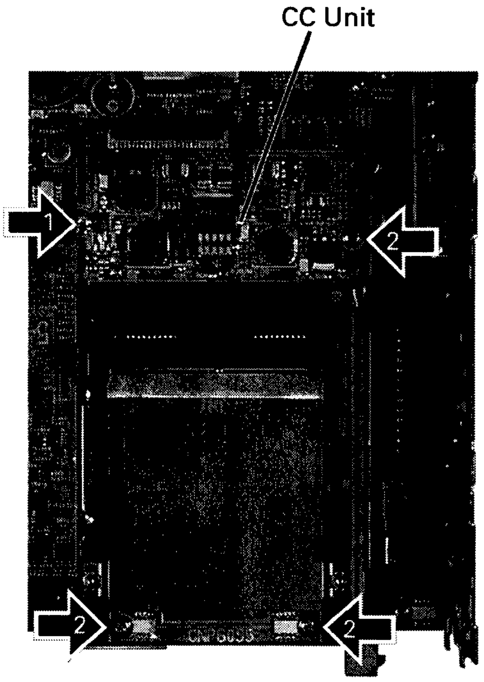


Fig.2

● Removing the Main PCB (Fig.3)

1. Remove the screw and then remove the Holder and the Battery.
2. Remove the screw and then remove the Fan Motor.
3. Remove the four screws.
4. Remove the six screws and then remove the Main PCB.

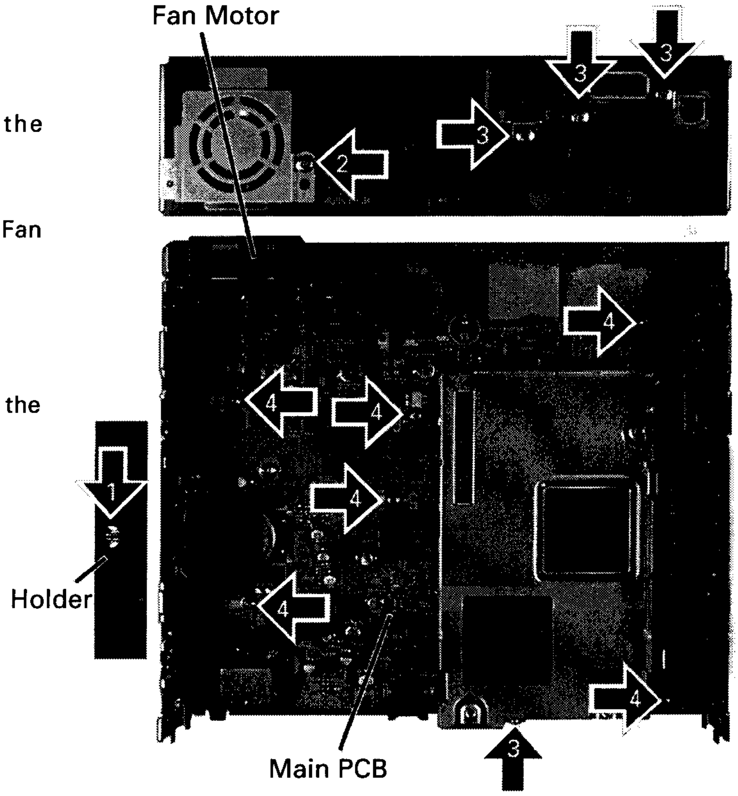

Fan Motor
3
3
3
2
4
4
4
1
4
Holder
4
4
Main PCB
3

Fig.3

● Handling the mechanical module

1. The mechanical module should be handled by holding the upper frame and main frame of the mechanical module.
2. The front section of the upper frame is not very sturdy, so this section should not be held too firmly (see fig. 1).

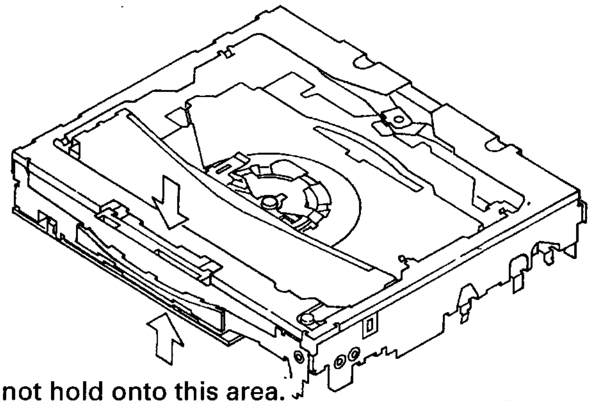


Fig. 1

● Removing the DVD CORE UNIT

1. Bring the mechanism to a locked position (disk load standby position).
2. Turn the mechanical module upside down.
3. Set the pick-up flexible cable to a shorted position on the land end (the other is auxiliary), and turn the SW knob in the direction opposite to OP (see fig. 2).
4. Remove the pick-up flexible cable and the CRG flexible cable from the connector. Remove the solder on the lead wires of the load motor.
5. Remove screws at three locations, and remove the DVD Core Unit (lift the board in the direction of the white arrow shown in fig. 3, and remove it out diagonally).

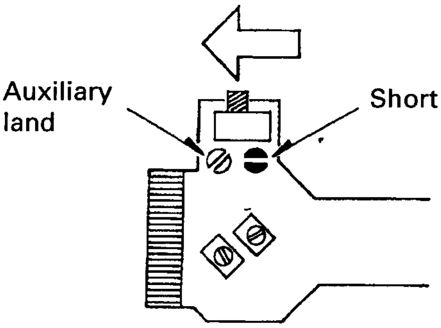


Fig. 2

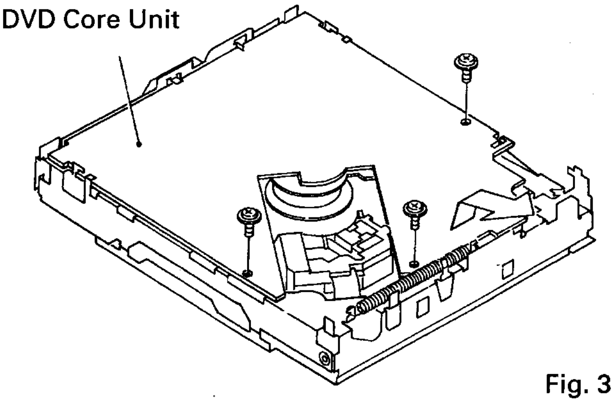


Fig. 3

● Removing the PU unit (see fig. 4)

1. Remove the DVD Core Unit according to the "Removing the DVD Core Unit" procedure described in the previous page.
2. Lift the pick-up rack to the center of the axis of the rack, turn it 90 degrees first, then press on it lightly, and fix it in place temporarily.
3. Remove the screw that keeps the main shaft clamp spring in place, and remove the main shaft clamp spring.
4. Remove the PU unit with the main shaft attached.

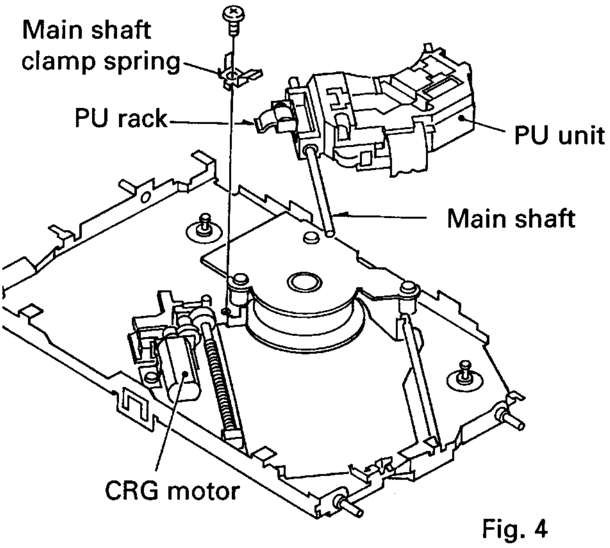
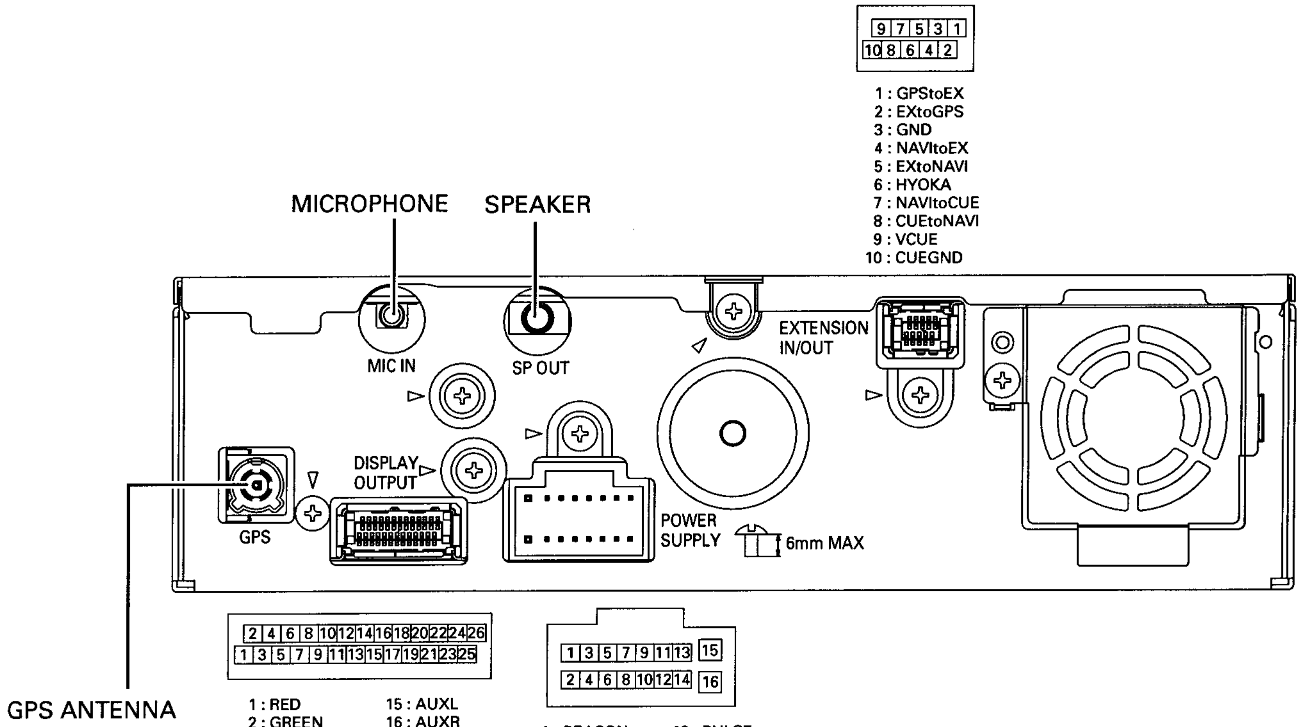


Fig. 4

7.1.4 CONNECTOR FUNCTION DESCRIPTION


9 7 5 3 1
10 8 6 4 2
MICROPHONE
SPEAKER
MIC IN
SP OUT
EXTENSION IN/OUT
DISPLAY OUTPUT
GPS
POWER SUPPLY
6mm MAX
GPS ANTENNA
2 4 6 8 10 12 14 16 18 20 22 24 26
1 3 5 7 9 11 13 15 17 19 21 23 25
1 3 5 7 9 11 13 15
2 4 6 8 10 12 14 16

1 : GPStoEX
2 : EXtoGPS
3 : GND
4 : NAVItoEX
5 : EXtoNAVI
6 : HYOKA
7 : NAVItoCUE
8 : CUEtoNAVI
9 : VCUE
10 : CUEGND

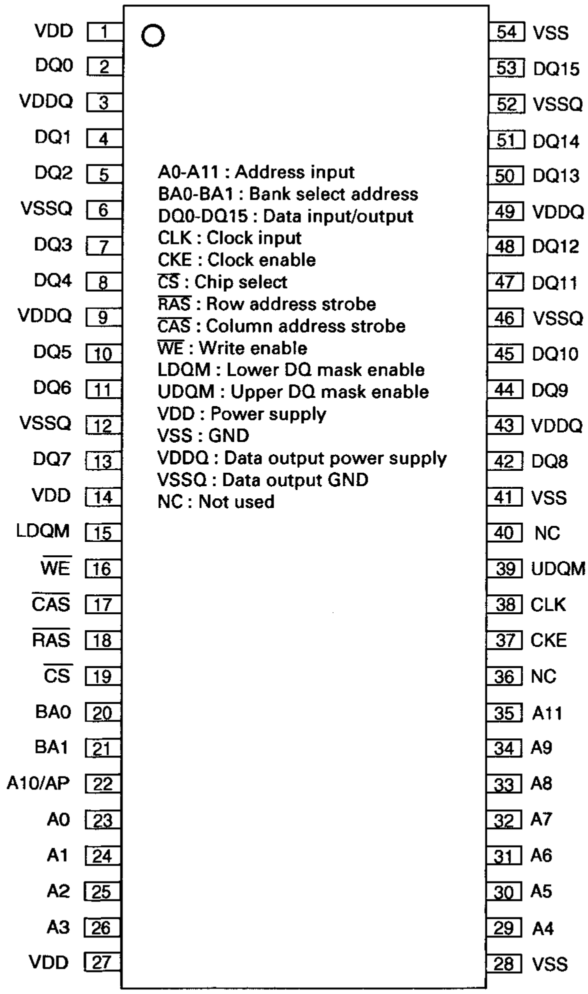
1 : RED
2 : GREEN
3 : BLUE
4 : CSYNC
5 : GND
6 : DVDVBS
7 : GND
8 : YS
9 : NC
10 : Lch
11 : Rch
12 : AGND
13 : GUIDE+
14 : GUIDE-
15 : AUXL
16 : AUXR
17 : AUXGND
18 : REM-IN
19 : NC
20 : TVON
21 : GUIDEON
22 : MONION
23 : VSW5
24 : HRXN
25 : HTXN
26 : GNDD

1 : BEACON
2 : SOURCE ON
3 : MONI ON
4 : GUIDE ON
5 : NC
6 : NC
7 : NC
8 : NC
9 : PKB
10 : PULSE
11 : ACC
12 : ANT ON
13 : ILM
14 : REV
15 : BUP
16 : GNDD

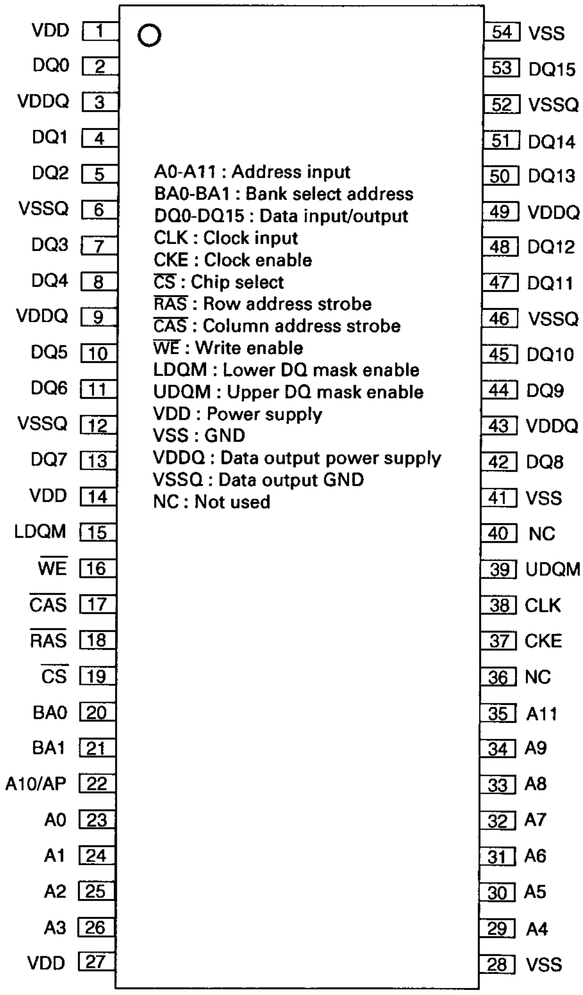
7.2 IC

K4S281632C-TL1L
M2V2840ATP-7L
TC7SZ08FU
UPD705103GM-180
PD6336B
TC74LCX08FT
TC7SH00FU
PD6373C
PD6374C
MB86291PFVS-G-DL
TC7WH08FU
PCM1725U
LP3965ES-ADJ
PCM1801U
TPS5102IDBT
PE5228A
TC7S14FU
TC7W126FU
TDA7052A
TPS5103IDB
MAX6364PUT29
PD6362B
AN8702FH
MN677061ZYUB
MNZS25BDAUB
TC74LCX244FT
MSM56V16160F8TKFM
TC74VCX74FT
MN677532JAUB
TC74VCX04FT
SM8703AV
PD6354B
AK4380VT
TC74VCX08FT
PE5277B
BA033SFP
BA18BC0WFP
BA00BC0WFP

*K4S281632C-TL1L

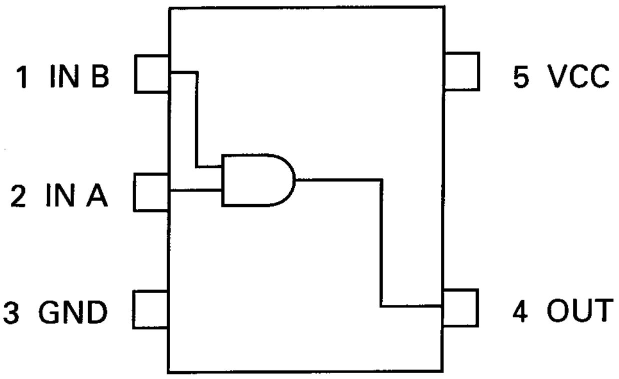

VDD 1
DQ0 2
VDDQ 3
DQ1 4
DQ2 5
VSSQ 6
DQ3 7
DQ4 8
VDDQ 9
DQ5 10
DQ6 11
VSSQ 12
DQ7 13
VDD 14
LDQM 15
$\overline{\text{WE}}$ 16
$\overline{\text{CAS}}$ 17
$\overline{\text{RAS}}$ 18
$\overline{\text{CS}}$ 19
BA0 20
BA1 21
A10/AP 22
A0 23
A1 24
A2 25
A3 26
VDD 27
54 VSS
53 DQ15
52 VSSQ
51 DQ14
50 DQ13
49 VDDQ
48 DQ12
47 DQ11
46 VSSQ
45 DQ10
44 DQ9
43 VDDQ
42 DQ8
41 VSS
40 NC
39 UDQM
38 CLK
37 CKE
36 NC
35 A11
34 A9
33 A8
32 A7
31 A6
30 A5
29 A4
28 VSS
A0-A11 : Address input
BA0-BA1 : Bank select address
DQ0-DQ15 : Data input/output
CLK : Clock input
CKE : Clock enable
$\overline{\text{CS}}$: Chip select
$\overline{\text{RAS}}$: Row address strobe
$\overline{\text{CAS}}$: Column address strobe
$\overline{\text{WE}}$: Write enable
LDQM : Lower DQ mask enable
UDQM : Upper DQ mask enable
VDD : Power supply
VSS : GND
VDDQ : Data output power supply
VSSQ : Data output GND
NC : Not used

*M2V2840ATP-7L

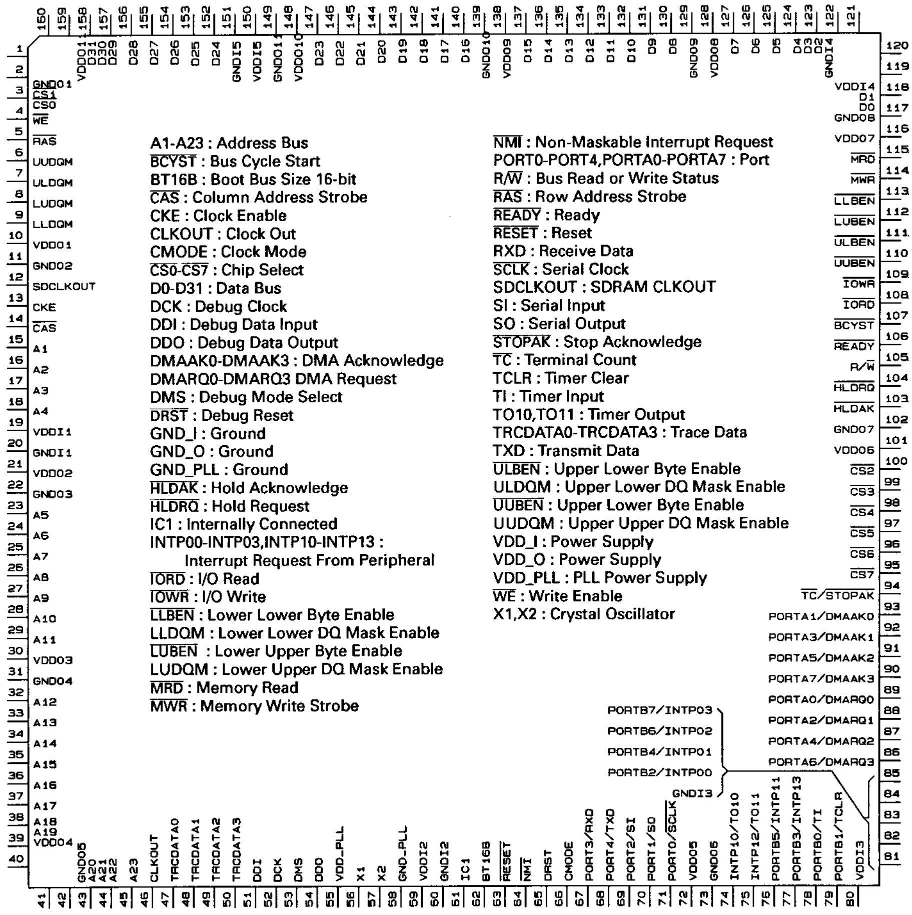

VDD 1
DQ0 2
VDDQ 3
DQ1 4
DQ2 5
VSSQ 6
DQ3 7
DQ4 8
VDDQ 9
DQ5 10
DQ6 11
VSSQ 12
DQ7 13
VDD 14
LDQM 15
$\overline{\text{WE}}$ 16
$\overline{\text{CAS}}$ 17
$\overline{\text{RAS}}$ 18
$\overline{\text{CS}}$ 19
BA0 20
BA1 21
A10/AP 22
A0 23
A1 24
A2 25
A3 26
VDD 27
54 VSS
53 DQ15
52 VSSQ
51 DQ14
50 DQ13
49 VDDQ
48 DQ12
47 DQ11
46 VSSQ
45 DQ10
44 DQ9
43 VDDQ
42 DQ8
41 VSS
40 NC
39 UDQM
38 CLK
37 CKE
36 NC
35 A11
34 A9
33 A8
32 A7
31 A6
30 A5
29 A4
28 VSS
A0-A11 : Address input
BA0-BA1 : Bank select address
DQ0-DQ15 : Data input/output
CLK : Clock input
CKE : Clock enable
$\overline{\text{CS}}$: Chip select
$\overline{\text{RAS}}$: Row address strobe
$\overline{\text{CAS}}$: Column address strobe
$\overline{\text{WE}}$: Write enable
LDQM : Lower DQ mask enable
UDQM : Upper DQ mask enable
VDD : Power supply
VSS : GND
VDDQ : Data output power supply
VSSQ : Data output GND
NC : Not used

IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

*TC7SZ08FU


1 IN B
2 IN A
3 GND
5 VCC
4 OUT

*UPD705103GM-180


VDDO1
D31
D30
D29
D28
D27
D26
D25
D24
GNDI5
VDDI5
GNDO11
VDDO10
D23
D22
D21
D20
D19
D18
D17
D16
GNDO10
VDDO9
D15
D14
D13
D12
D11
D10
D9
D8
GNDO9
VDDO8
D7
D6
D5
D4
D3
D2
GNDI4
GNDO1
CS1
CS0
WE
RAS
UUDQM
ULDQM
LUDQM
LLDQM
VDDO1
GNDO2
SDCLKOUT
CKE
CAS
A1
A2
A3
A4
VDDI1
GNDI1
VDDO2
GNDO3
A5
A6
A7
A8
A9
A10
A11
VDDO3
GNDO4
A12
A13
A14
A15
A16
A17
A18
A19
VDDO4
GNDO5
A20
A21
A22
A23
CLKOUT
TRCDATA0
TRCDATA1
TRCDATA2
TRCDATA3
DDI
DCK
DMS
DDO
VDD_PLL
X1
X2
GND_PLL
VDDI2
GNDI2
IC1
BT16B
RESET
NMI
DRST
CMODE
PORT3/RXD
PORT4/TXD
PORT2/SI
PORT1/SO
PORT0/SCLK
VDDO5
GNDO6
INTP10/TO10
INTP12/TO11
PORTB5/INTP11
PORTB3/INTP13
PORTB0/TI
PORTB1/TCLR
VDDI3
PORTB7/INTP03
PORTB6/INTP02
PORTB4/INTP01
PORTB2/INTP00
GNDI3
VDDI4
D1
D0
GNDO8
VDDO7
MRD
MWR
LLBEN
LUBEN
ULBEN
UUBEN
IOWR
IORD
BCYST
READY
R/W
HLDRQ
HLDAK
GNDO7
VDDO6
CS2
CS3
CS4
CS5
CS6
CS7
TC/STOPAK
PORTA1/DMAAK0
PORTA3/DMAAK1
PORTA5/DMAAK2
PORTA7/DMAAK3
PORTA0/DMARQ0
PORTA2/DMARQ1
PORTA4/DMARQ2
PORTA6/DMARQ3

A1-A23 : Address Bus
BCYST : Bus Cycle Start
BT16B : Boot Bus Size 16-bit
CAS : Column Address Strobe
CKE : Clock Enable
CLKOUT : Clock Out
CMODE : Clock Mode
CS0-CS7 : Chip Select
D0-D31 : Data Bus
DCK : Debug Clock
DDI : Debug Data Input
DDO : Debug Data Output
DMAAK0-DMAAK3 : DMA Acknowledge
DMARQ0-DMARQ3 DMA Request
DMS : Debug Mode Select
DRST : Debug Reset
GND_I : Ground
GND_O : Ground
GND_PLL : Ground
HLDAK : Hold Acknowledge
HLDRQ : Hold Request
IC1 : Internally Connected
INTP00-INTP03,INTP10-INTP13 :
Interrupt Request From Peripheral
IORD : I/O Read
IOWR : I/O Write
LLBEN : Lower Lower Byte Enable
LLDQM : Lower Lower DQ Mask Enable
LUBEN : Lower Upper Byte Enable
LUDQM : Lower Upper DQ Mask Enable
MRD : Memory Read
MWR : Memory Write Strobe
NMI : Non-Maskable Interrupt Request
PORT0-PORT4,PORTA0-PORTA7 : Port
R/W : Bus Read or Write Status
RAS : Row Address Strobe
READY : Ready
RESET : Reset
RXD : Receive Data
SCLK : Serial Clock
SDCLKOUT : SDRAM CLKOUT
SI : Serial Input
SO : Serial Output
STOPAK : Stop Acknowledge
TC : Terminal Count
TCLR : Timer Clear
TI : Timer Input
TO10,TO11 : Timer Output
TRCDATA0-TRCDATA3 : Trace Data
TXD : Transmit Data
ULBEN : Upper Lower Byte Enable
ULDQM : Upper Lower DQ Mask Enable
UUBEN : Upper Lower Byte Enable
UUDQM : Upper Upper DQ Mask Enable
VDD_I : Power Supply
VDD_O : Power Supply
VDD_PLL : PLL Power Supply
WE : Write Enable
X1,X2 : Crystal Oscillator

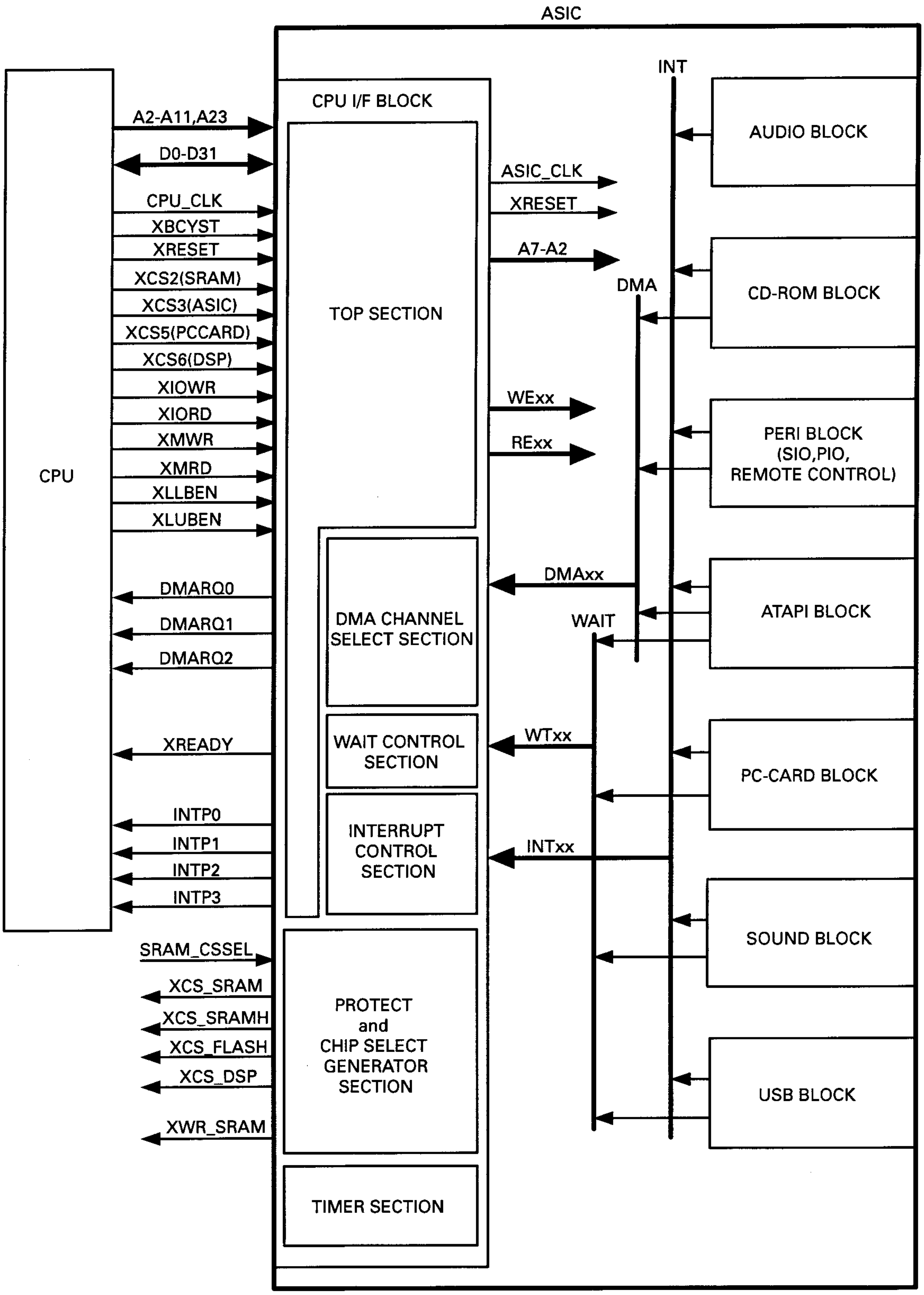
*PD6336B

● Pin Arrangement Chart

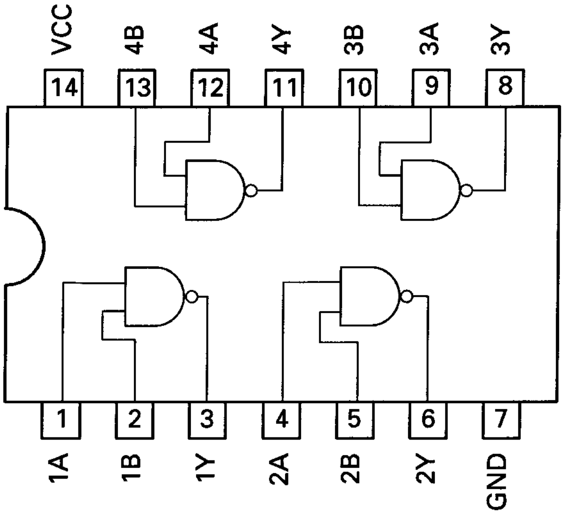
1	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
2	85	160	159	158	157	156	155	154	153	152	151	150	149	148	147	146	145	144	143	142	63
3	86	161	228	227	226	225	224	223	222	221	220	219	218	217	216	215	214	213	212	141	62
4	87	162	229	288	287	286	285	284	283	282	281	280	279	278	277	276	275	274	211	140	61
5	88	163	230															273	210	139	60
6	89	164	231															272	209	138	59
7	90	165	232															271	208	137	58
8	91	166	233															270	207	136	57
9	92	167	234															269	206	135	56
10	93	168	235															268	205	134	55
11	94	169	236							TOP VEIW								267	204	133	54
12	95	170	237															266	203	132	53
13	96	171	238															265	202	131	52
14	97	172	239															264	201	130	51
15	98	173	240															263	200	129	50
16	99	174	241															262	199	128	49
17	100	175	242															261	198	127	48
18	101	176	243															260	197	126	47
19	102	177	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	196	125	46
20	103	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	124	45
21	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	44
22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43

VSS	PIO27	DSP_BCLKI	PIO25	PIO24	PIO22	OVDD3	DSP_BDI	DSP_BFSI	DSP_XHINT	DSP_HRDY	OVSS6	DSP_BFSO	DSP_BCLKO	XCS_SRAMH	OVDD2	DSP_XRS	DSP_ATTCNT	D31	CD_MCLK	ADC_GCNT2	VSS
PIO29	PIO28	PIO26	D4	D6	OVSS7	D10	XCS_DSP	D14	PIO23	D18	D20	DSP_BDO	D24	PIO_OUT	OVSS5	TEST1	CD_LRCLK	CD_BLK	ADC_GCNT0	ADC_GCNT1	ADC_DATA
USBXPWREN	XCS_FLASH	D2	D3	D5	D8	D9	D12	D13	D16	D17	D19	D22	D23	D26	D27	D29	D30	A2	A3	ADC_BCLK	ADC_LRCLK
USBXOVRCUR	D0	D1	VSS	VDD	D7	VDD	D11	VSS	D15	VDD	VDD	D21	VSS	D25	VDD	D28	VSS	VSS	A4	ADC_MCLK	TEST4
UVD1M	XMRD	XMWR	VSS															VDD	A5	A6	EXTAL1
UVD1P	USBPWREN	XLLBEN	XLUBEN															VPDP	A7	A8	OVSS4
UVD2M	XIOWR	XIORD	VDD															VDD	A9	A10	XTAL1
UVD2P	NC	NC	NC															A11	A12	TEST2	TEST3
USBOVRCUR	NC	NC	VSS															VSS	PC_READY	DAC_MCLK	DAC_LRCLK
USB_CLK	NC	NC	NC															PC_XVS2	PC_RESET	DAC_BCLK	DAC_DATA
XCS_SRAM	XREADY	XBCYST	VDD							TOP VEIW								VDD	PC_WXT	PC_XREG	PIO21
XWR_SRAM	SRAM_CSSEL	XCS2	VDD															VDD	PC_BVD2	PC_A0	OVSS3
PIO31	PIO30	XCS3	XCS5															PC_BVD1	PC_WP	PIO20	CD_DATA
IR_RX	XCS6	DREQ0	VSS															VSS	PC_XCD2	PIO19	PIO18
TEST0	XTST	DREQ1	DREQ2															PC_XCD1	PC_XCE1	PIO17	PIO16
XTAL0	SMCK	INT3	VDD															VDD	PC_XCE2	PIO15	PIO14
MST	XSM	INT2	INT1															PC_XOE	PC_XVS1	PIO13	PIO12
EXTAL0	GDC_WT	INT0	VDD															VSS	PC_XIORD	PIO11	PIO10
UART9_TXD	UART9_RXD	ATA_DA0	VSS	VSS	ATA_XDIOR	VDD	ATA_DD1	VSS	ATA_DD5	VDD	VDD	ATA_DD10	VSS	ATA_DD14	VDD	ATA_XCS0	VDD	VSS	PC_XIOWR	PIO9	PIO8
UART8_TXD	UART8_RXD	ATA_DA1	ATA_INT	ATA_XDMACK	ATA_IORDY	ATA_DMARQ	ATA_DD0	ATA_DD3	ATA_DD4	ATA_DD7	ATA_DD8	ATA_DD9	ATA_DD12	ATA_DD13	ATA_DA2	ATA_XCS1	PC_XPWR	PC_XUBUF	PC_XWE	PIO7	PIO6
UART7_TXD	UART7_RXD	UART6_RXD	OVSS0	UART4_RXD	XRESET	ATA_XDIOW	UART3_RXD	ATA_DD2	UART1_RXD	ATA_DD6	ATA_XRESET	UART_XDCD	ATA_DD11	UART_XRI	ATA_DD15	UART1_XDTR	ATA_DIR	PC_XLBUF	PIO2	PIO5	PIO4
VSS	UART6_TXD	UART5_RXD	UART5_TXD	UART4_TXD	UART3_TXD	OVDD0	UART2_TXD	UART2_RXD	UART1_TXD	A23	CPU_CLK	OVSS1	UART1_XCTS	UART_XDSR	OVDD1	UART1_XRTS	PIO0	PIO1	OVSS2	PIO3	VSS

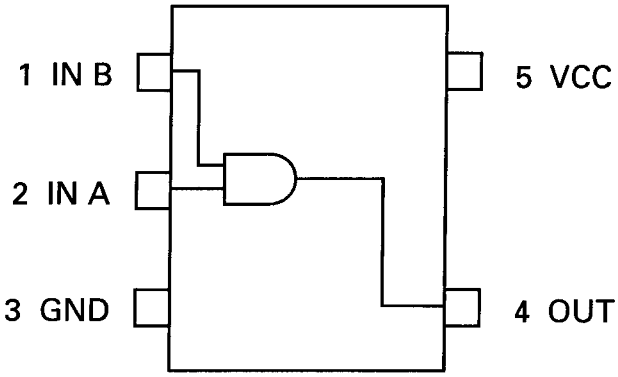
● Block Diagram Chart


ASIC
CPU
A2-A11,A23
D0-D31
CPU_CLK
XBCYST
XRESET
XCS2(SRAM)
XCS3(ASIC)
XCS5(PCCARD)
XCS6(DSP)
XIOWR
XIORD
XMWR
XMRD
XLLBEN
XLUBEN
DMARQ0
DMARQ1
DMARQ2
XREADY
INTP0
INTP1
INTP2
INTP3
SRAM_CSSEL
XCS_SRAM
XCS_SRAMH
XCS_FLASH
XCS_DSP
XWR_SRAM
CPU I/F BLOCK
TOP SECTION
DMA CHANNEL SELECT SECTION
WAIT CONTROL SECTION
INTERRUPT CONTROL SECTION
PROTECT and CHIP SELECT GENERATOR SECTION
TIMER SECTION
ASIC_CLK
XRESET
A7-A2
WExx
RExx
DMAxx
WTxx
INTxx
INT
DMA
WAIT
AUDIO BLOCK
CD-ROM BLOCK
PERI BLOCK (SIO,PIO, REMOTE CONTROL)
ATAPI BLOCK
PC-CARD BLOCK
SOUND BLOCK
USB BLOCK

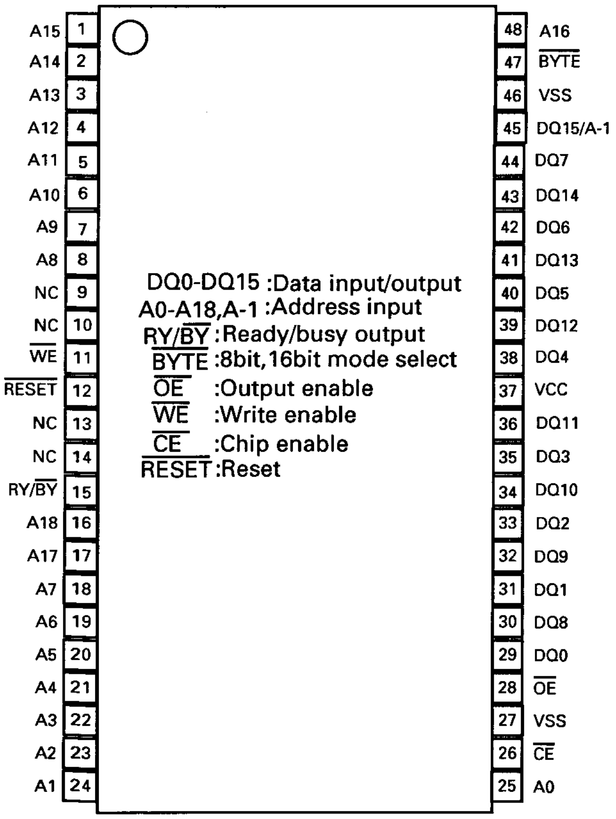
*TC74LCX08FT


VCC 14
4B 13
4A 12
4Y 11
3B 10
3A 9
3Y 8
1A 1
1B 2
1Y 3
2A 4
2B 5
2Y 6
GND 7

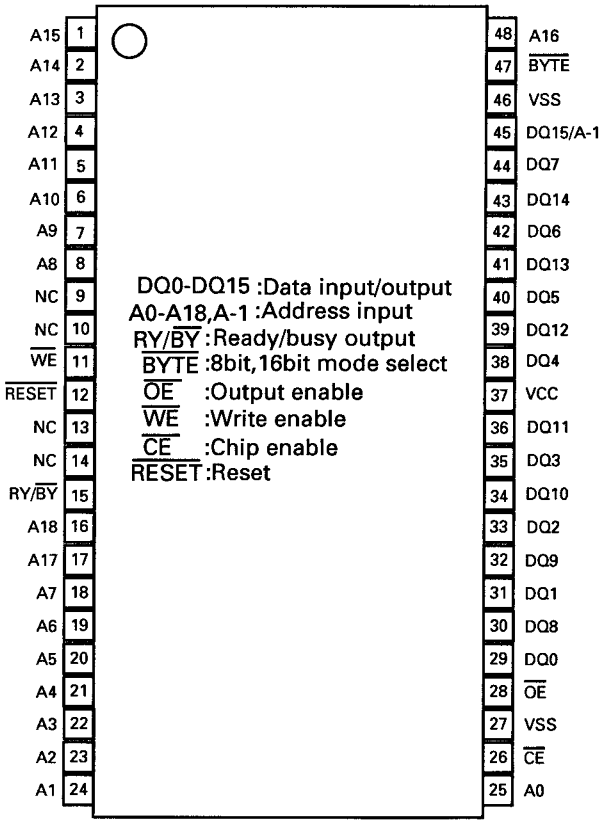
*TC7SH00FU


1 IN B
2 IN A
3 GND
5 VCC
4 OUT

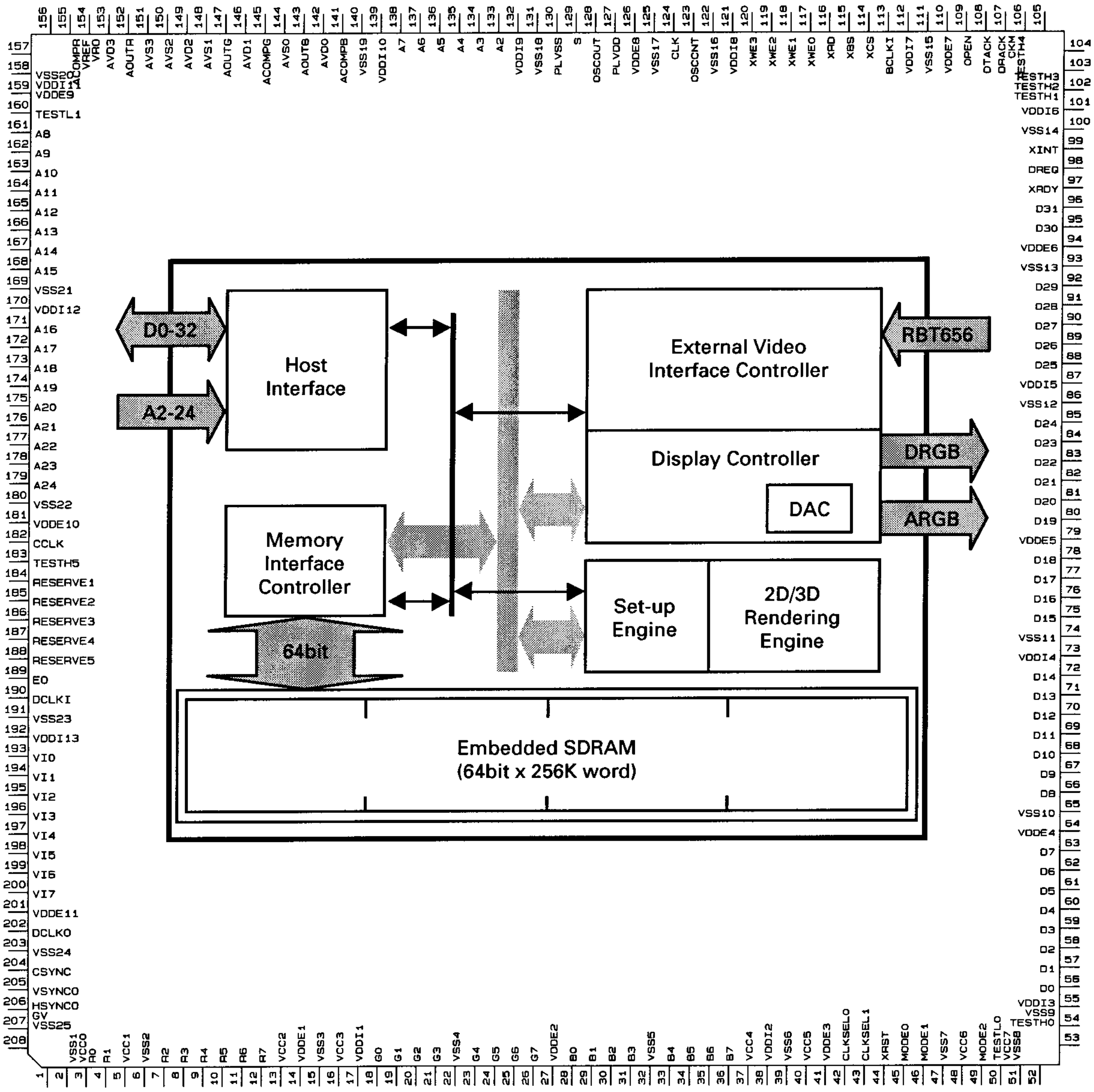
*PD6373C


A15 1
A14 2
A13 3
A12 4
A11 5
A10 6
A9 7
A8 8
NC 9
NC 10
WE 11
RESET 12
NC 13
NC 14
RY/BY 15
A18 16
A17 17
A7 18
A6 19
A5 20
A4 21
A3 22
A2 23
A1 24
48 A16
47 BYTE
46 VSS
45 DQ15/A-1
44 DQ7
43 DQ14
42 DQ6
41 DQ13
40 DQ5
39 DQ12
38 DQ4
37 VCC
36 DQ11
35 DQ3
34 DQ10
33 DQ2
32 DQ9
31 DQ1
30 DQ8
29 DQ0
28 OE
27 VSS
26 CE
25 A0
DQ0-DQ15 :Data input/output
A0-A18,A-1 :Address input
RY/BY :Ready/busy output
BYTE :8bit,16bit mode select
OE :Output enable
WE :Write enable
CE :Chip enable
RESET :Reset

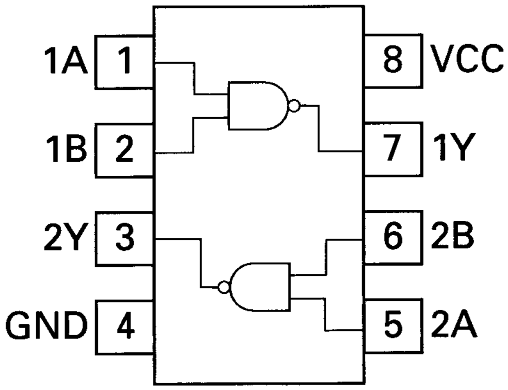
*PD6374C


A15 1
A14 2
A13 3
A12 4
A11 5
A10 6
A9 7
A8 8
NC 9
NC 10
WE 11
RESET 12
NC 13
NC 14
RY/BY 15
A18 16
A17 17
A7 18
A6 19
A5 20
A4 21
A3 22
A2 23
A1 24
48 A16
47 BYTE
46 VSS
45 DQ15/A-1
44 DQ7
43 DQ14
42 DQ6
41 DQ13
40 DQ5
39 DQ12
38 DQ4
37 VCC
36 DQ11
35 DQ3
34 DQ10
33 DQ2
32 DQ9
31 DQ1
30 DQ8
29 DQ0
28 OE
27 VSS
26 CE
25 A0
DQ0-DQ15 :Data input/output
A0-A18,A-1 :Address input
RY/BY :Ready/busy output
BYTE :8bit,16bit mode select
OE :Output enable
WE :Write enable
CE :Chip enable
RESET :Reset

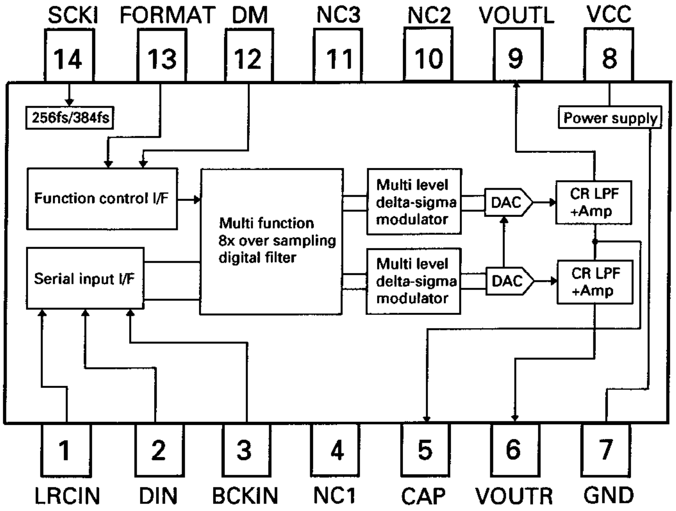
*MB86291PFVS-G-DL


ACOMPR
VREF
VRO
AVD3
AOUTR
AVS3
AVS2
AVD2
AVS1
AOUTG
AVD1
ACOMPG
AVS0
AOUTB
AVD0
ACOMPB
VSS19
VDDI10
A7
A6
A5
A4
A3
A2
VDDI9
VSS18
PLVSS
S
OSCOUT
PLVDD
VDDE8
VSS17
CLK
OSCCNT
VSS16
VDDI8
XWE3
XWE2
XWE1
XWE0
XRD
XBS
XCS
BCLKI
VDDI7
VSS15
VDDE7
OPEN
DTACK
DRACK
CKM
TESTH4
VSS20
VDDI11
VDDE9
TESTL1
A8
A9
A10
A11
A12
A13
A14
A15
VSS21
VDDI12
A16
A17
A18
A19
A20
A21
A22
A23
A24
VSS22
VDDE10
CCLK
TESTH5
RESERVE1
RESERVE2
RESERVE3
RESERVE4
RESERVE5
EO
DCLKI
VSS23
VDDI13
VI0
VI1
VI2
VI3
VI4
VI5
VI6
VI7
VDDE11
DCLKO
VSS24
CSYNC
VSYNCO
HSYNCO
GV
VSS25
TESTH3
TESTH2
TESTH1
VDDI6
VSS14
XINT
DREQ
XRDY
D31
D30
VDDE6
VSS13
D29
D28
D27
D26
D25
VDDI5
VSS12
D24
D23
D22
D21
D20
D19
VDDE5
D18
D17
D16
D15
VSS11
VDDI4
D14
D13
D12
D11
D10
D9
D8
VSS10
VDDE4
D7
D6
D5
D4
D3
D2
D1
D0
VDDI3
VSS9
TESTH0
VSS1
VCC0
R0
R1
VCC1
VSS2
R2
R3
R4
R5
R6
R7
VCC2
VDDE1
VSS3
VCC3
VDDI1
G0
G1
G2
G3
VSS4
G4
G5
G6
G7
VDDE2
B0
B1
B2
B3
VSS5
B4
B5
B6
B7
VCC4
VDDI2
VSS6
VCC5
VDDE3
CLKSEL0
CLKSEL1
XRST
MODE0
MODE1
VSS7
VCC6
MODE2
TESTL0
VCC7
VSS8
D0-32
A2-24
Host Interface
Memory Interface Controller
64bit
External Video Interface Controller
RBT656
Display Controller
DAC
DRGB
ARGB
Set-up Engine
2D/3D Rendering Engine
Embedded SDRAM (64bit x 256K word)

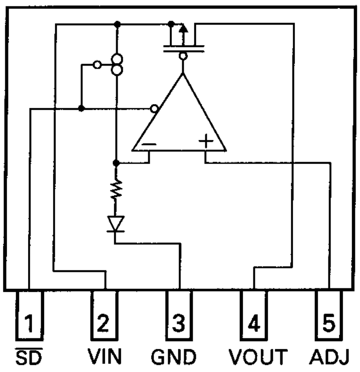
*TC7WH08FU


1A 1
1B 2
2Y 3
GND 4
8 VCC
7 1Y
6 2B
5 2A

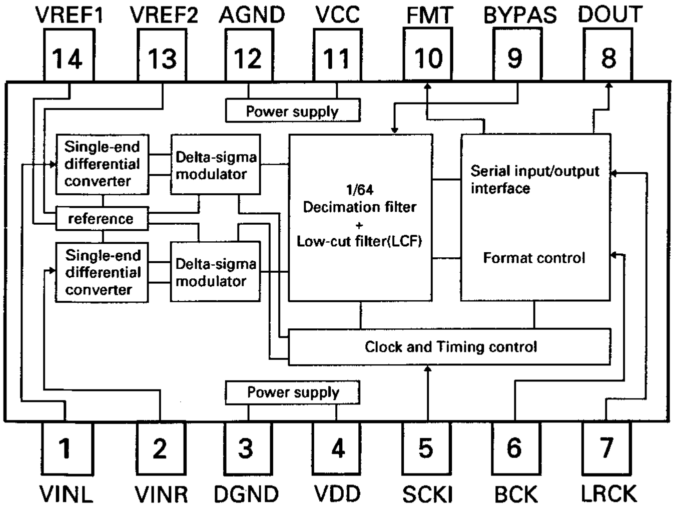
*PCM1725U


SCKI
FORMAT
DM
NC3
NC2
VOUTL
VCC
14
13
12
11
10
9
8
256fs/384fs
Power supply
Function control I/F
Serial input I/F
Multi function
8x over sampling
digital filter
Multi level
delta-sigma
modulator
Multi level
delta-sigma
modulator
DAC
DAC
CR LPF
+Amp
CR LPF
+Amp
1
2
3
4
5
6
7
LRCIN
DIN
BCKIN
NC1
CAP
VOUTR
GND

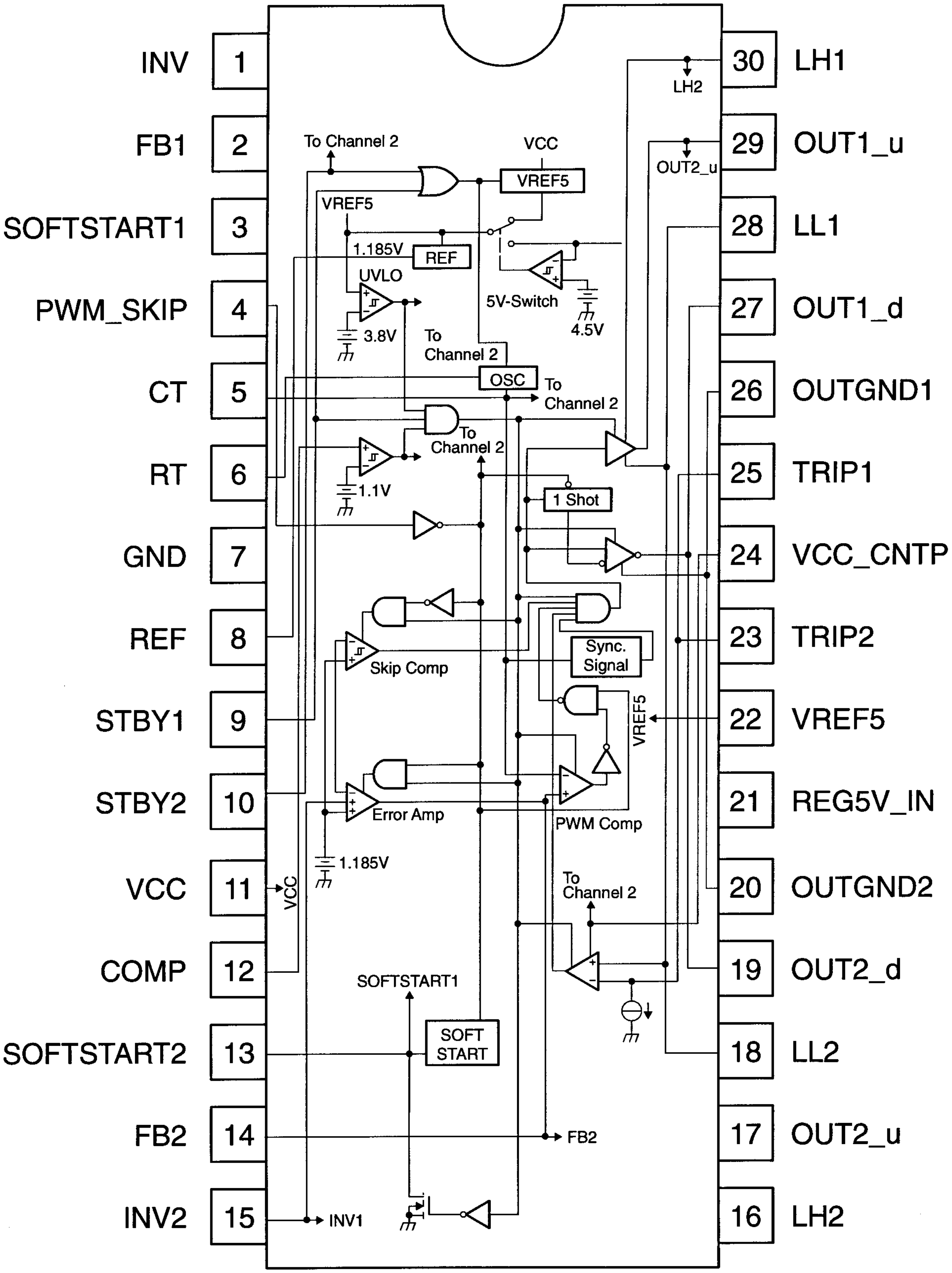
*LP3965ES-ADJ


1
2
3
4
5
SD
VIN
GND
VOUT
ADJ

*PCM1801U


VREF1
VREF2
AGND
VCC
FMT
BYPAS
DOUT
14
13
12
11
10
9
8
Power supply
Single-end
differential
converter
Delta-sigma
modulator
reference
Single-end
differential
converter
Delta-sigma
modulator
1/64
Decimation filter
+
Low-cut filter(LCF)
Serial input/output
interface
Format control
Clock and Timing control
Power supply
1
2
3
4
5
6
7
VINL
VINR
DGND
VDD
SCKI
BCK
LRCK

*TPS5102IDBT

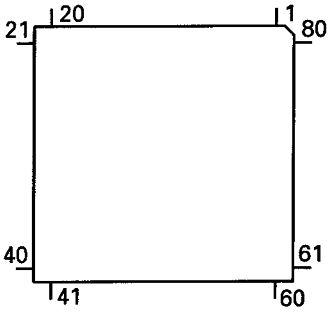

INV 1
FB1 2
SOFTSTART1 3
PWM_SKIP 4
CT 5
RT 6
GND 7
REF 8
STBY1 9
STBY2 10
VCC 11
COMP 12
SOFTSTART2 13
FB2 14
INV2 15
30 LH1
29 OUT1_u
28 LL1
27 OUT1_d
26 OUTGND1
25 TRIP1
24 VCC_CNTP
23 TRIP2
22 VREF5
21 REG5V_IN
20 OUTGND2
19 OUT2_d
18 LL2
17 OUT2_u
16 LH2
LH2
OUT2_u
To Channel 2
VCC
VREF5
VREF5
1.185V
REF
UVLO
3.8V
5V-Switch
4.5V
To Channel 2
OSC
To Channel 2
To Channel 2
1.1V
1 Shot
Skip Comp
Sync. Signal
VREF5
Error Amp
PWM Comp
1.185V
VCC
To Channel 2
SOFTSTART1
SOFT START
FB2
INV1

● Pin Functions (PE5228A)

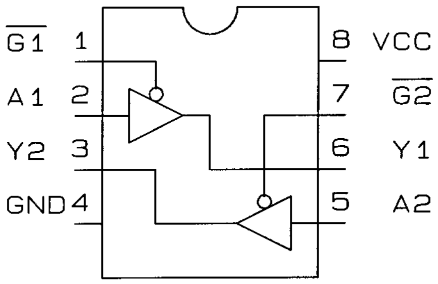
Pin No.	Pin Name	I/O	Format	Function and Operation
1-3	NC			Not used
4	AVSS			A/D GND
5	VOL	O		Guide voice volume output
6	NC			Not used
7	AVREF1			(D/A converter reference voltage)
8	FROMCC	I		Data input from CC UNIT (UART)
9	TOCC	O	C	Data output to CC UNIT (UART)
10	NC			Not used
11	FORMEX	I		Data input from EXT (UART)
12	TOEX	O	C	Data output to EXT (UART)
13-15	NC			Not used
16	TSI/FSI	I		Test program data input
17	TSO/FSO	O	C	Test program data output
18	TSCKFCK	I		Test program clock input
19,20	NC			Not used
21	ROMDT	O	C	ROM collection data output
22	ROMCLK	O	C	ROM collection clock output
23	ROMCS	O	C	ROM collection chip select output
24	ACCPW	O	C	ACC power supply output
25	GPSON	O	C	GPS power supply ON output
26	DRAMPW	O	C	DRAM power supply control output
27	RGBMUTE	O	C	RGB audio mute output
28	RCAMUTE	O	C	RCA audio mute output
29	RSTOUT	O	C	Reset output
30	DVDON	O	C	DVD power supply ON output
31	CCON	O	C	Car computer power supply ON output
32	IRQPOW	O	C	Emergency stand-by request output (BSENS)
33	VSS1			GND
34,35	NC			Not used
36-38	SIMUKE0-2	I		Model detect input 0-2
39,40	SEDAI0,1	I		Generation detect input 0,1
41	TVON	O	C	TV communication enable output
42	ALARMOUT	O	C	Detach warning LED output
43	MAYSNS	I		MAYDAY UNIT detect input (H : No unit)
44-47	CCPORT0-3	O	C	Control port output from CC UNIT 0-3 (Stand-by time = L)
48,49	INPORT0,1	I		Input notice port input to CC UNIT 0,1 (Stand-by time = L)
50	TESTMODE	I		Navigation test mode detect input (H : Test mode)
51	TESTIN	I		Chip test / Enable input (L : Chip test)
52	NC			Not used
53	CPUWDT	I		WDT operation input from CC UNIT
54	NC			Not used
55	M/S	I		Master / Slave input (H : Alone)
56,57	NC			Not used
58	TIMEOUT	I		(L : No time-out)
59	NC			Not used
60	$\overline{\text{RESET}}$	I		Reset input
61	REMIN	I		Remote control data input
62	$\overline{\text{BSENS}}$	I		Back Up sense input
63	$\overline{\text{ASENS}}$	I		ACC sense input
64	HELPIN	I		HELP system SW input
65	DISC	I		DISC detect input
66	NC			Not used
67	VSS0			GND
68	VDD1			Power supply
69	X2			Crystal oscillating element connection pin (Main system)
70	X1			Crystal oscillating element connection pin (Main system)

Pin No.	Pin Name	I/O	Format	Function and Operation
71	TEST/VPP			Connect to GND
72	XT2			Crystal oscillating element connection pin (Sub system)
73	XT1			Crystal oscillating element connection pin (Sub system)
74	VDD0			Power supply
75	AVDD			(A/D converter power supply)
76-80	NC			Not used

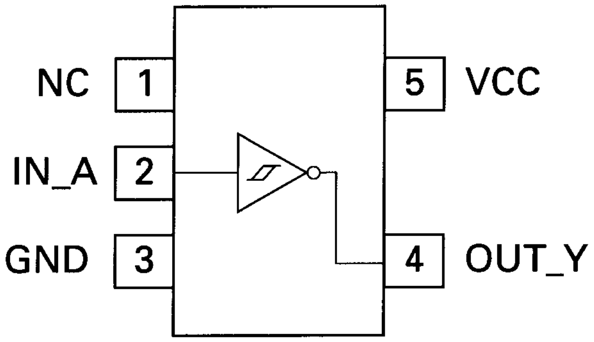
*PE5228A


20
1
21
80
40
61
41
60

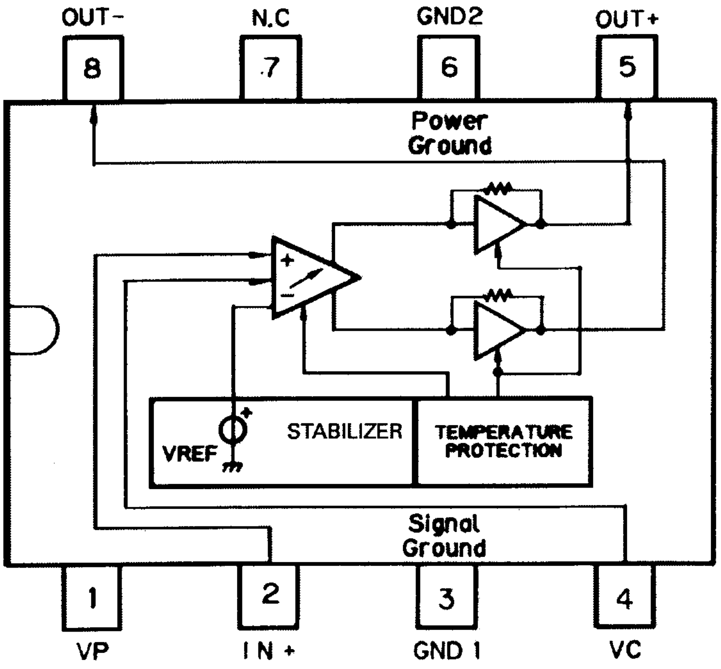
*TC7W126FU


$\overline{G1}$ 1
A1 2
Y2 3
GND 4
8 VCC
7 $\overline{G2}$
6 Y1
5 A2

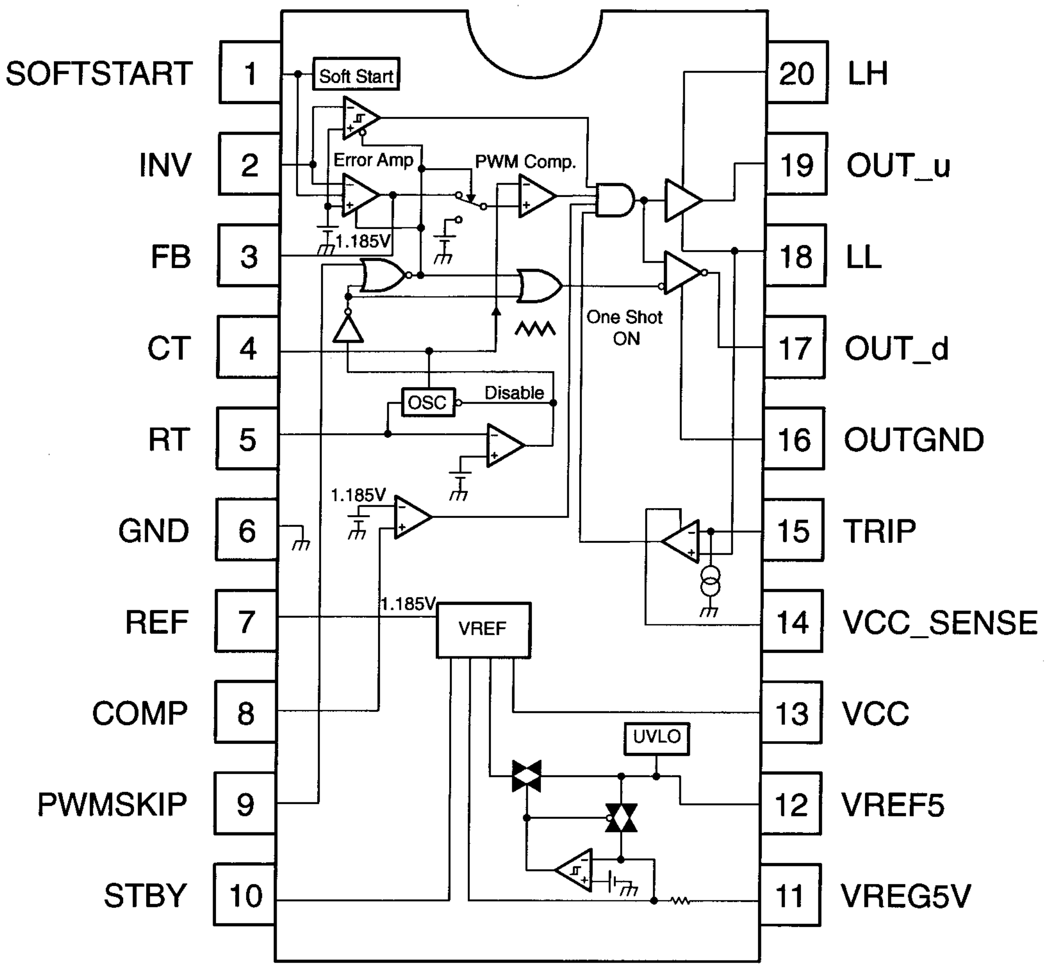
*TC7S14FU


NC 1
IN_A 2
GND 3
5 VCC
4 OUT_Y

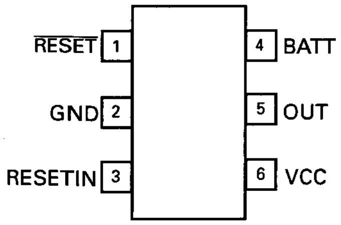
TDA7052A


OUT-
N.C
GND2
OUT+
8
7
6
5
Power Ground
+
-
VREF
STABILIZER
TEMPERATURE PROTECTION
Signal Ground
1
2
3
4
VP
IN +
GND 1
VC

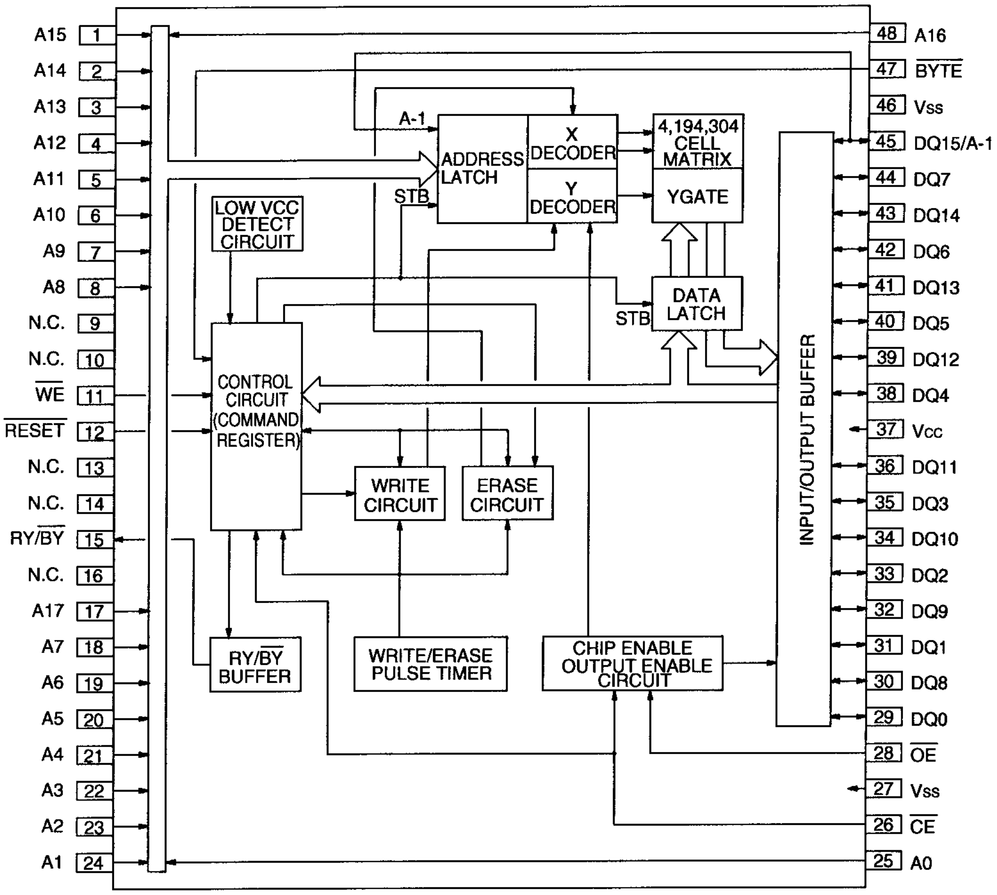
*TPS5103IDB


SOFTSTART 1
INV 2
FB 3
CT 4
RT 5
GND 6
REF 7
COMP 8
PWMSKIP 9
STBY 10
20 LH
19 OUT_u
18 LL
17 OUT_d
16 OUTGND
15 TRIP
14 VCC_SENSE
13 VCC
12 VREF5
11 VREG5V
Soft Start
Error Amp
PWM Comp.
1.185V
One Shot
ON
OSC
Disable
1.185V
1.185V
VREF
UVLO

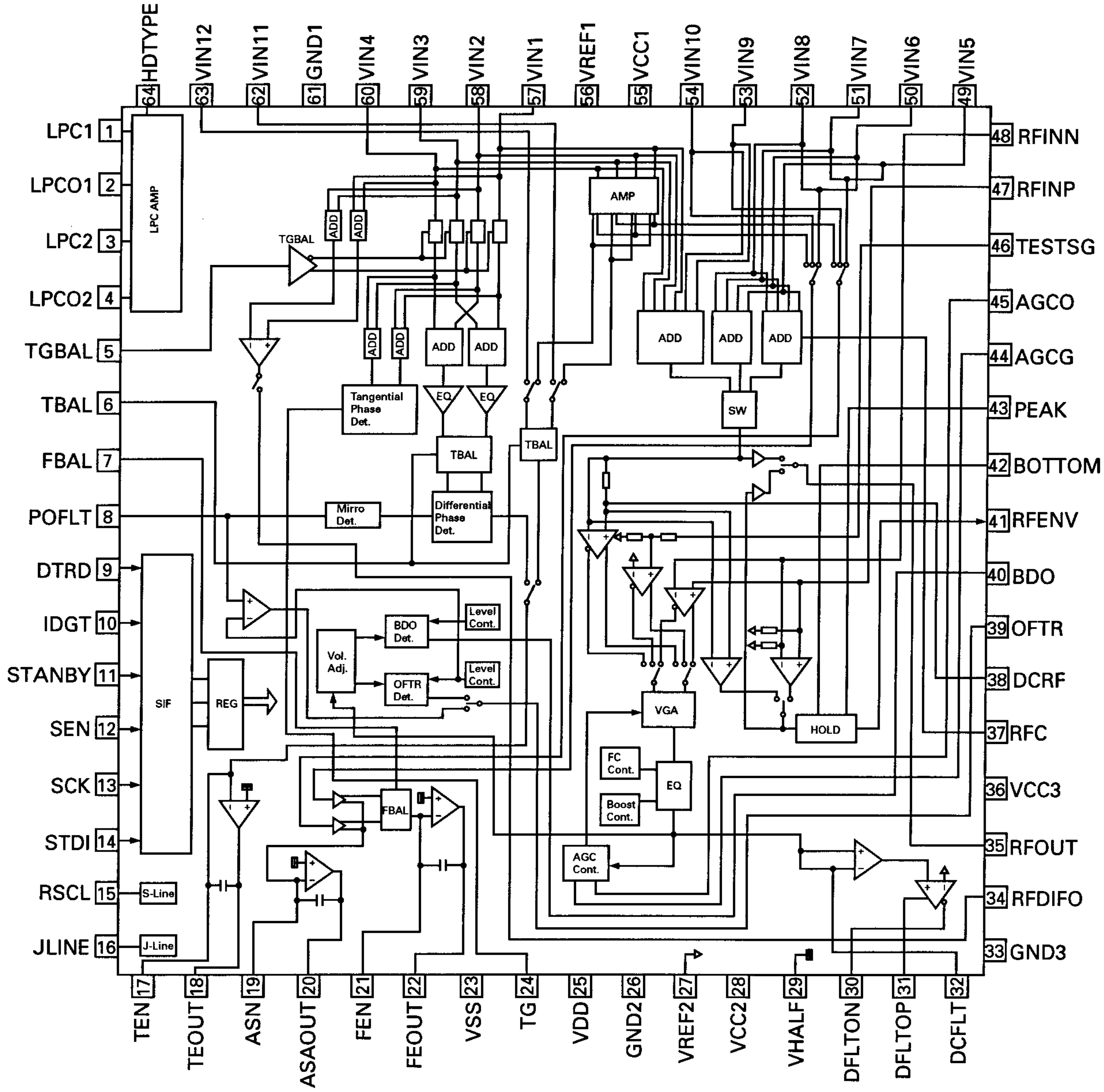
*MAX6364PUT29


RESET 1
GND 2
RESETIN 3
4 BATT
5 OUT
6 VCC

*PD6362B


A15 1
A14 2
A13 3
A12 4
A11 5
A10 6
A9 7
A8 8
N.C. 9
N.C. 10
$\overline{WE}$ 11
$\overline{RESET}$ 12
N.C. 13
N.C. 14
RY/$\overline{BY}$ 15
N.C. 16
A17 17
A7 18
A6 19
A5 20
A4 21
A3 22
A2 23
A1 24
48 A16
47 $\overline{BYTE}$
46 Vss
45 DQ15/A-1
44 DQ7
43 DQ14
42 DQ6
41 DQ13
40 DQ5
39 DQ12
38 DQ4
37 Vcc
36 DQ11
35 DQ3
34 DQ10
33 DQ2
32 DQ9
31 DQ1
30 DQ8
29 DQ0
28 $\overline{OE}$
27 Vss
26 $\overline{CE}$
25 A0
A-1
ADDRESS LATCH
STB
X DECODER
Y DECODER
4,194,304 CELL MATRIX
YGATE
LOW VCC DETECT CIRCUIT
DATA LATCH
STB
CONTROL CIRCUIT (COMMAND REGISTER)
WRITE CIRCUIT
ERASE CIRCUIT
INPUT/OUTPUT BUFFER
RY/$\overline{BY}$ BUFFER
WRITE/ERASE PULSE TIMER
CHIP ENABLE OUTPUT ENABLE CIRCUIT

*AN8702FH

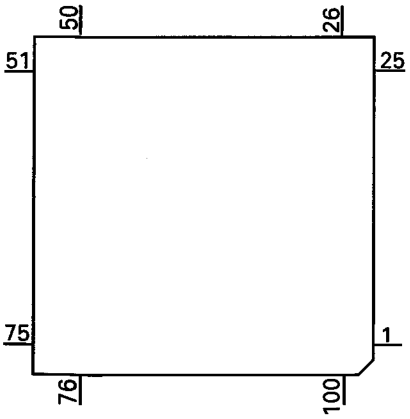

64 HDTYPE
63 VIN12
62 VIN11
61 GND1
60 VIN4
59 VIN3
58 VIN2
57 VIN1
56 VREF1
55 VCC1
54 VIN10
53 VIN9
52 VIN8
51 VIN7
50 VIN6
49 VIN5
1 LPC1
2 LPCO1
3 LPC2
4 LPCO2
5 TGBAL
6 TBAL
7 FBAL
8 POFLT
9 DTRD
10 IDGT
11 STANBY
12 SEN
13 SCK
14 STDI
15 RSCL
16 JLINE
48 RFINN
47 RFINP
46 TESTSG
45 AGCO
44 AGCG
43 PEAK
42 BOTTOM
41 RFENV
40 BDO
39 OFTR
38 DCRF
37 RFC
36 VCC3
35 RFOUT
34 RFDIFO
33 GND3
17 TEN
18 TEOUT
19 ASN
20 ASAOUT
21 FEN
22 FEOUT
23 VSS
24 TG
25 VDD
26 GND2
27 VREF2
28 VCC2
29 VHALF
30 DFLTON
31 DFLTOP
32 DCFLT
LPC AMP
TGBAL
ADD
ADD
ADD
ADD
ADD
ADD
AMP
ADD
ADD
ADD
Tangential Phase Det.
EQ
EQ
TBAL
TBAL
SW
Mirro Det.
Differential Phase Det.
Level Cont.
BDO Det.
Vol. Adj.
OFTR Det.
Level Cont.
SIF
REG
VGA
HOLD
FC Cont.
EQ
Boost Cont.
FBAL
AGC Cont.
S-Line
J-Line

● Pin Functions(MN677061ZYUB)

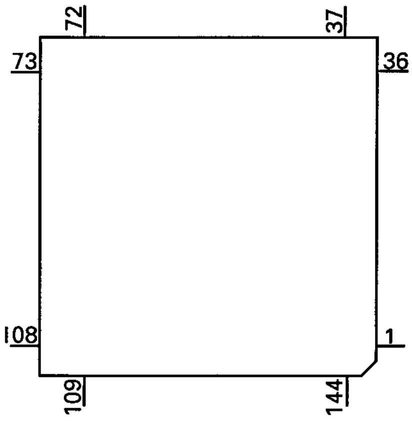
Pin No.	Pin Name	I/O	Function and Operation
1	AS	I	Full adder signal input
2	TE	I	Phase-contrast/Three beam tracking error input
3	FE	I	Focus error input
4	AVDD		Analog power supply (3.3V)
5	FODRV	O	Focus driver output
6	TRDRV	O	Tracking driver output
7	AVSS1		Analog GND
8	ARF	I	Equivalent RF+ input
9	$\overline{\text{ARF}}$	I	Equivalent RF- input
10,11	IREF1,2	I	DBAL reference current input 1,2
12,13	DSLF1,2	I/O	DSL capacitor input/output 1,2
14	AVDD2		Analog power supply (3.3V)
15	VHALF		Reference voltage (1.65±0.1V)
16,17	NC		Not used
18	VREFH		Reference voltage (2.2±0.1V)
19	RVI	I/O	VERFH reference current resistor input/output
20	AVSS2		Analog GND
21,22	PLFLT1,2	O	PLL capacitor output 1,2
23	JITOUT	I/O	Jitter signal monitor input/output
24	N.C.1	I	Open
25	N.C.2	I/O	Pull up
26	NC		Not used
27	AVDD3		Analog power supply (3.3V)
28	N.C.3	I	Pull up
29	N.C.4		Not used
30	AVSS3		Analog GND
31	N.C.5		Pull up
32	N.C.6		Not used
33	N.C.7		Open
34	TRCRS	I	Track cross production signal input
35	VCOF	I/O	JFVCO control voltage input/output
36	DBALO	O	DSL balance adjustment output
37	JLIN	O	J-line set output
38	AVDD4		Analog power supply (3.3V)
39	LOUT	O	Analog audio left output
40	ROUT	O	Analog audio right output
41	AVSS4	I	Analog GND
42	GBAL	O	Tangential balance adjustment output
43	TBAL	O	Tracking balance adjustment output
44	FBAL	O	Focus balance adjustment output
45	VSS331		I/O GND
46	VDD331		I/O power supply (3.3V)
47	OFTR	I	Off track signal input
48	SYSCLK	I	System clock input
49	BDO	I	RF dropout signal input
50	TSTSG	O	Calibration signal output
51	TRSDRV	O	Traverse driver output
52	SPDRV	O	Spindle driver output
53	FG	I	FG signal input
54	N.C.8		Not used
55	CRGDRV	O	Carriage driver output
56	N.C.10		Not used
57	VSS251		GND
58	VDD251		Power supply
59	DTRD	I	Data read control signal output
60	LDGT	I	GND
61	LRCK	O	LR channel data strobe output
62	SBBCLK	O	CD sub code synchronism signal output

Pin No.	Pin Name	I/O	Function and Operation
63	PLLOK	I	PLL drag OK signal input
64	IDHOLD		GND
65	DACLRCK	I	1bit DAC - LR channel data strobe input
66	DACDATA	I	CD 1bit DAC channel data input
67	$\overline{\text{TRON}}$	O	Tracking ON output
68	DACCLK	O	1bit DAC channel data shift clock input
69	IPFLG	O	CIRG error flag output
70	SUBC	O	CD sub code output
71	$\overline{\text{CLDCK}}$	O	CD sub code data frame clock output
72	MINTEST	I	GND
73	TEST	I	GND
74	VSS332		I/O GND
75	VDD332		I/O power supply (3.3V)
76	CHCK40	O	SRDATA clock output
77–80	DAT3–0	O	SRDATA output 3–0
81	VSS333		I/O GND
82	VDD333		I/O power supply (3.3V)
83	TX	O	Digital audio interface data output
84	XRESET	I	Reset input
85	ENS	I	Servo DSC serial I/F chip select input
86	ENC	I	CIRC serial I/F chip select input
87	CPUIRQ	O	Interrupt request output to system computer
88	CPUCLK	I	System computer serial I/F clock input
89	CPUDTIN	I	System computer serial I/F data input
90	CPUDTOUT	O	System computer serial I/F data output
91,92	MONA,B	O	Monitor terminal output A,B
93	CDPLLOK	O	CD PLL drag OK signal output
94	N.C.12		Not used
95	VSS252		GND
96	VDD252		Power supply
97,98	N.C.		Pull up
99	TG	I	Tangential phase-contrast input
100	REFNV	I	RF envelop input

*MN677061ZYUB



*MNZS25BDAUB

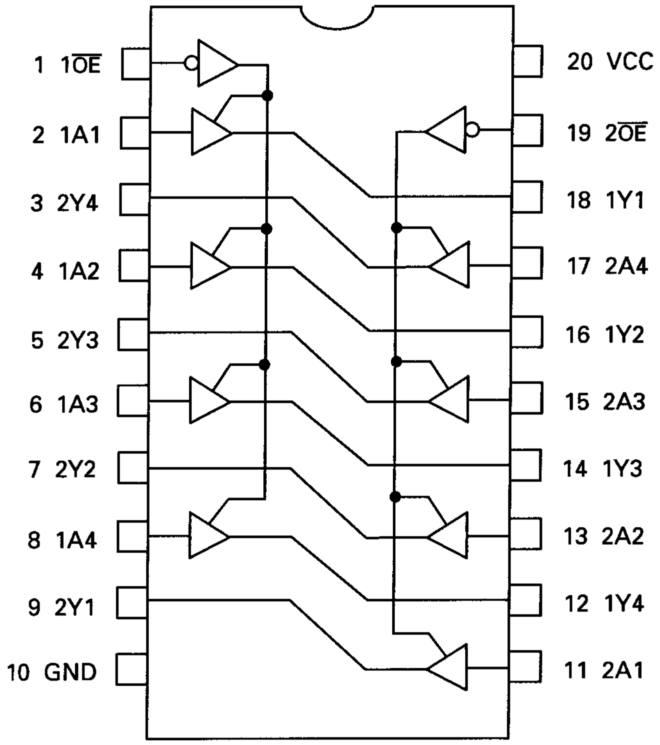


● Pin Functions(MNZS25BDAUB)

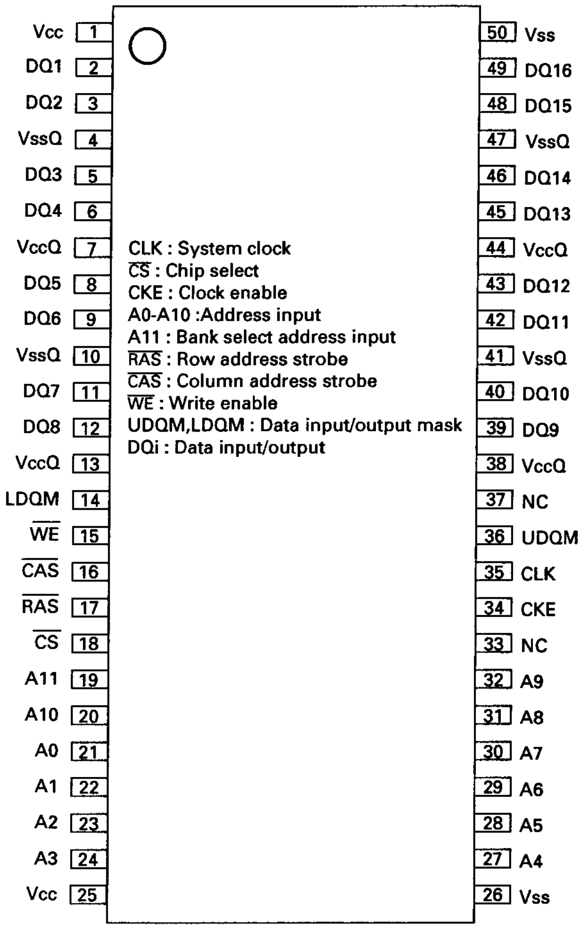
Pin No.	Pin Name	I/O	Function and Operation
1	HDD15	I/O	ATAPI HOST data input/output 15
2	HDD0	I/O	ATAPI HOST data input/output 0
3	HDD14	I/O	ATAPI HOST data input/output 14
4	VDD31		I/O power supply (3.3V)
5	HDD1	I/O	ATAPI HOST data input/output 1
6	HDD13	I/O	ATAPI HOST data input/output 13
7	HDD2	I/O	ATAPI HOST data input/output 2
8	VSS1		GND
9	HDD12	I/O	ATAPI HOST data input/output 12
10	VDD21		Digital power supply (2.7V)
11	HDD3	I/O	ATAPI HOST data input/output 3
12	HDD11	I/O	ATAPI HOST data input/output 11
13	HDD4	I/O	ATAPI HOST data input/output 4
14	HDD10	I/O	ATAPI HOST data input/output 10
15	VDD32		I/O power supply (3.3V)
16	HDD5	I/O	ATAPI HOST data input/output 5
17	HDD9	I/O	ATAPI HOST data input/output 9
18	VSS2		GND
19	HDD6	I/O	ATAPI HOST data input/output 6
20	HDD8	I/O	ATAPI HOST data input/output 8
21	HDD7	I/O	ATAPI HOST data input/output 7
22	VDDH		ATAPI reference power supply (5.0V)
23	$\overline{RESET}$		Reset input
24	MASTER	I/O	ATAPI master/slave select input/output
25	$\overline{INT0}$	O	System computer interrupt output 0
26	$\overline{INT1}$	O	System computer interrupt output 1
27	WAITODC	O	System computer bus wait control output
28	$\overline{MRST}$	O	System computer reset output
29	DASPST	I	DASP initialize value input
30	VDD33		I/O power supply (3.3V)
31	NC		Not used
32	P2	O	PORT output
33	UATASEL	I	Internal clock select input
34	VSS3		GND
35	PVSSDRAM1		GND
36	PVDDDRAM1		Digital power supply (2.7V)
37,38	CPUADR17,16	I	System computer address input 17,16
39	PVSSDRAM2		GND
40–43	CPUADR15-12	I	System computer address input 15-12
44	PVDDDRAM2		Digital power supply (2.7V)
45–55	CPUADR11-1	I	System computer address input11-1
56	VSS4		GND
57	CPUADR0	I	System computer address input 0
58	$\overline{CS}$	I	System computer chip select input
59	$\overline{WR}$	I	System computer write signal input
60	$\overline{RD}$	I	System computer read signal input
61	VDD34		I/O power supply (3.3V)
62,63	CPUDT7,6	I/O	System computer data input/output 7,6
64,65	PTESTDRAM0,1		GND
66	VDD22		Digital power supply (2.7V)
67	VSS5		GND
68–70	CPUDT5-3	I/O	System computer data input/output 5-3
71	VSS6		GND
72–74	CPUDT2-0	I/O	System computer data input/output 2-0
75	CLKOUT1	O	System computer clock output 1
76	VDD35		I/O power supply (3.3V)
77	NC		Not used
78	DTRD	O	CAPA read gate output
79	NC		Not used

Pin No.	Pin Name	I/O	Function and Operation
80	BDO	I	RF dropout signal input
81	LRCK	I	LR identifier signal input
82	SBBCLK	I	CD sub code block clock input
83	VSS7		GND
84	MMOD		GND
85	$\overline{\text{RST}}$	I	System reset input
86	VDD23		Digital power supply (2.7V)
87	CLKOUT2	O	System computer clock output 2
88	PLLOK	O	Frame mark detect signal output
89	NC		Not used
90	DACLRCK	O	LR identifier signal output
91	DACDATA	O	Serial output
92	$\overline{\text{TRON}}$	I	Tracking ON input
93,94	NC		Not used
95	DACCLK	I	1bit DAC Serial output clock input
96	IPFLG	I	interpolation flag input
97	TX	I	TX input
98	LRCK	I	VSS
99	VSS8		GND
100	OSCI1	I	Oscillator pin input
101	OSCO1	O	Oscillator pin output
102	VDD36		I/O power supply (3.3V)
103	PVSS		GND
104	PVDD		I/O power supply (3.3V)
105	P1		VDD3
106	P0		VDD3
107	VSS9		GND
108	NC		Not used
109	SUBC	I	Sub code serial input
110	XCLDCK	I	Sub code Frame clock input
111	CHCK4	I	Read clock input to DAT3-0
112–115	DAT3-0	I	Read data input from DISC 3-0
116	VDD37		I/O power supply (3.3V)
117	SCLOCK	I/O	Pull up
118	SDATA	I/O	Pull up
119–122	MONI3-0	O	Internal signal monitor output 3-0
123	VSS10		GND
124	$\overline{\text{EJECT}}$	I	Eject detect input
125	VDD24		Digital power supply (2.7V)
126	$\overline{\text{TRYCL}}$	I	Tray close detect input
127	$\overline{\text{DASP}}$	I/O	ATAPI drive active/slave connect input/output
128	$\overline{\text{CS3FX}}$	I	ATAPI HOST chip select input
129	$\overline{\text{CS1FX}}$	I	ATAPI HOST chip select input
130	VDD38		I/O power supply (3.3V)
131	DA2	I/O	ATAPI HOST address input/output 2
132	DA0	I/O	ATAPI HOST address input/output 0
133	$\overline{\text{PDIAG}}$	I/O	ATAPI slave/master diagnosis input/output
134	VSS11		GND
135	DA1	I/O	ATAPI HOST address input/output 1
136	$\overline{\text{IOCS16}}$	O	ATAPI HOST data bus width select output
137	INTRQ	O	ATAPI HOST interrupt request output
138	VDD39		I/O power supply (3.3V)
139	$\overline{\text{DMACK}}$	I	ATAPI HOST DMA response input
140	IORDY	O	ATAPI HOST ready output
141	$\overline{\text{IORD}}$	I/O	ATAPI HOST data read input/output
142	VSS12		GND
143	$\overline{\text{IOWR}}$	I/O	ATAPI HOST data write input/output
144	DMARQ	O	ATAPI HOST DMA request output

*TC74LCX244FT

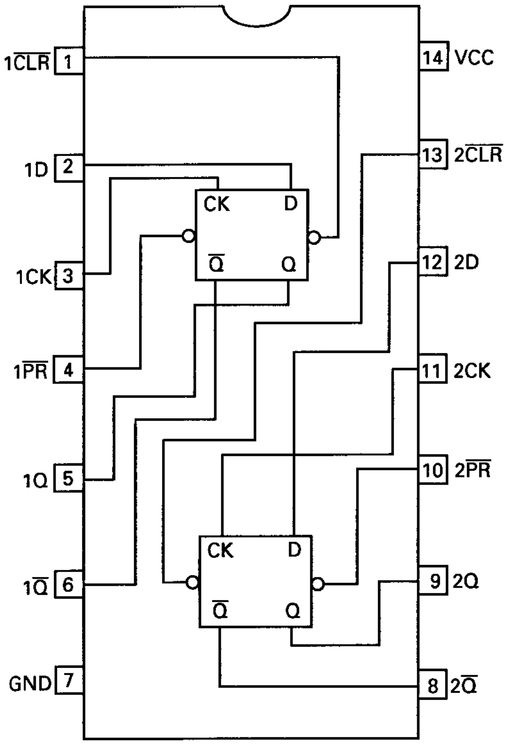

1 $1\overline{OE}$
2 1A1
3 2Y4
4 1A2
5 2Y3
6 1A3
7 2Y2
8 1A4
9 2Y1
10 GND
20 VCC
19 $2\overline{OE}$
18 1Y1
17 2A4
16 1Y2
15 2A3
14 1Y3
13 2A2
12 1Y4
11 2A1

*MSM56V16160F8TKFM


Vcc 1
DQ1 2
DQ2 3
VssQ 4
DQ3 5
DQ4 6
VccQ 7
DQ5 8
DQ6 9
VssQ 10
DQ7 11
DQ8 12
VccQ 13
LDQM 14
$\overline{WE}$ 15
$\overline{CAS}$ 16
$\overline{RAS}$ 17
$\overline{CS}$ 18
A11 19
A10 20
A0 21
A1 22
A2 23
A3 24
Vcc 25
50 Vss
49 DQ16
48 DQ15
47 VssQ
46 DQ14
45 DQ13
44 VccQ
43 DQ12
42 DQ11
41 VssQ
40 DQ10
39 DQ9
38 VccQ
37 NC
36 UDQM
35 CLK
34 CKE
33 NC
32 A9
31 A8
30 A7
29 A6
28 A5
27 A4
26 Vss

CLK : System clock
$\overline{CS}$: Chip select
CKE : Clock enable
A0-A10 :Address input
A11 : Bank select address input
$\overline{RAS}$: Row address strobe
$\overline{CAS}$: Column address strobe
$\overline{WE}$: Write enable
UDQM,LDQM : Data input/output mask
DQi : Data input/output

*TC74VCX74FT


$1\overline{CLR}$ 1
1D 2
1CK 3
$1\overline{PR}$ 4
1Q 5
$1\overline{Q}$ 6
GND 7
14 VCC
13 $2\overline{CLR}$
12 2D
11 2CK
10 $2\overline{PR}$
9 2Q
8 $2\overline{Q}$
CK
D
$\overline{Q}$
Q
CK
D
$\overline{Q}$
Q

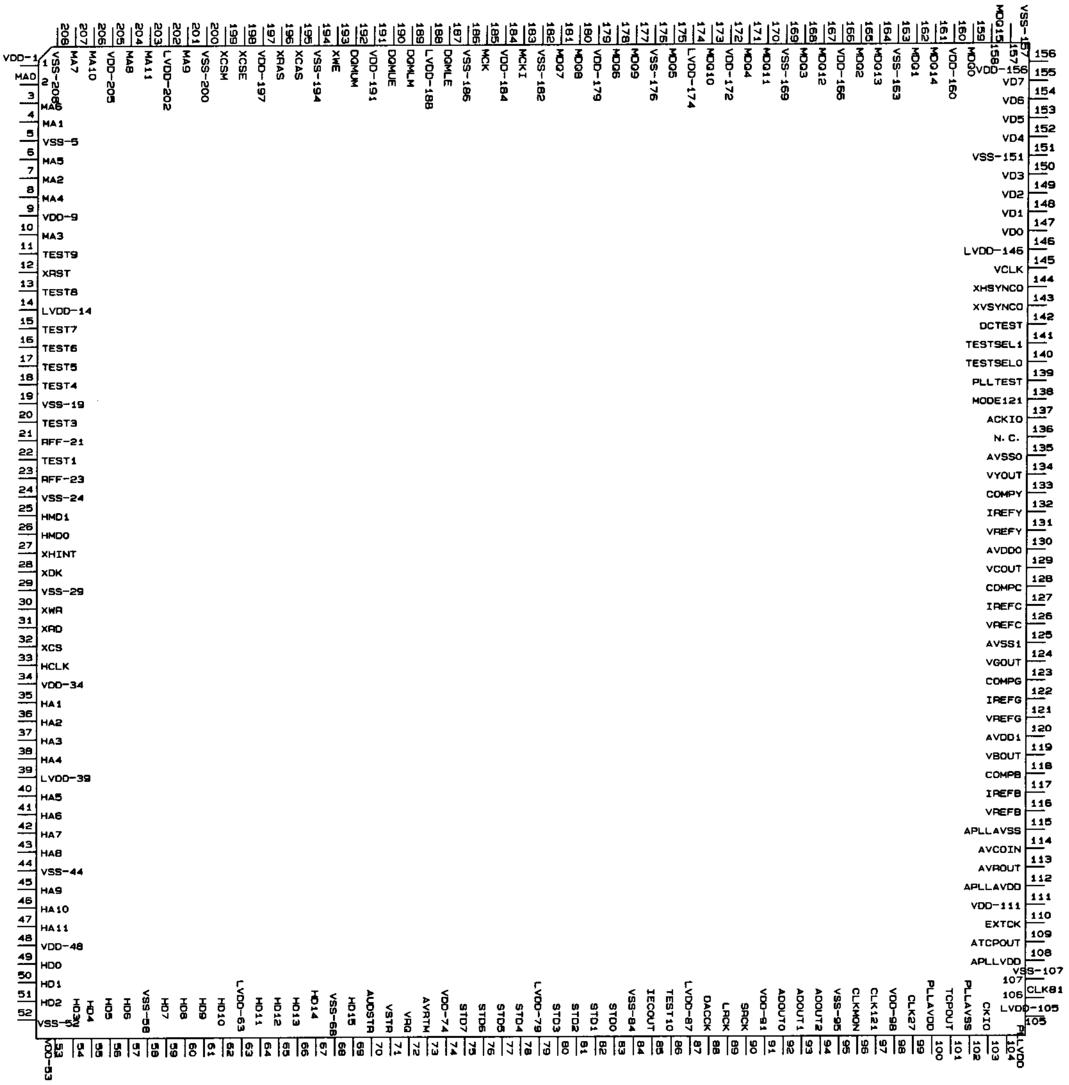
● Pin Functions(MN677532JAUB)

Pin No.	Pin Name	I/O	Function and Operation
1	VDD-1		Power supply
2	MA0	O	Bank sell and address
3	MA6	O	Bank sell and address
4	MA1	O	Bank sell and address
5	VSS-5		GND
6	MA5	O	Bank sell and address
7	MA2	O	Bank sell and address
8	MA4	O	Bank sell and address
9	VDD-9		Power supply
10	MA3	O	Bank sell and address
11	TEST9	O	Test signal
12	XRST	I	System reset
13	TEST8	O	Test signal
14	LVDD-14	O	Lch Power supply
15-18	TEST7-4	O	Test signal
19	VSS-19		GND
20	TEST3	O	Test signal
21	RFF-21	O	Repeat first field flag output
22	TEST1	O	Test signal
23	RFF-23	O	Repeat first field flag output
24	VSS-24	O	GND
25,26	HMD1,0	I	Host CPU select
27	XHINT	O	Interrupt strobe
28	XDK	O	Data acknowledge
29	VSS-29		GND
30	XWR	I	Write enable
31	XRD	I	Read enable
32	XCS	I	Chip select
33	HCLK	I	Host CPU clock
34	VDD-34		Power supply
35-38	HA1-4	I	Address bus
39	LVDD-39		Lch Power supply
40-43	HA5-8	I	Address bus
44	VSS-44		GND
45-47	HA9-11	I	Address bus
48	VDD-48	I	Power supply
49-51	HD0-2	I/O	Data bus
52	VSS-52		GND
53	VDD-53	I	Power supply
54-57	HD3-6	I/O	Data bus
58	VSS-58		GND
59-62	HD7-10	I/O	Data bus
63	LVDD-63		Lch Power supply
64-67	HD11-14	I/O	Data bus
68	VSS-68		GND
69	HD15	I/O	Data bus
70	AUDSTR	I	Data strobe
71	VSTR	I	Data strobe
72	VRQ	O	DMA request
73	AVRTM	I	Select separation signal
74	VDD-74		Power supply
75-78	STD7-4	I	Stream data/CD-Audio bypass port
79	LVDD-79		Lch Power supply
80-83	STD3-0	I	Stream data/CD-Audio bypass port
84	VSS-84		GND
85	IECOUT	O	IEC958 data output
86	TEST10	O	Test signal
87	LVDD-87		Lch Power supply

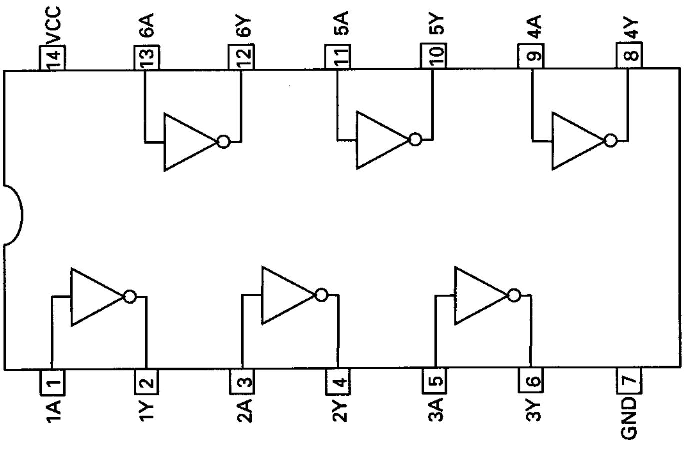
Pin No.	Pin Name	I/O	Function and Operation
88	DACCK	O	DAC clock output
89	LRCK	O	LR clock output
90	SRCK	O	Bit clock output
91	VDD-91		Power supply
92-94	ADOUT0-2	O	Audio data output
95	VSS-95		GND
96	CLKMON	O	Clock monitor
97	CLK121	I	121.5MHz clock input
98	VDD-98	O	Power supply
99	CLK27	I	27MHz clock input
100	PLLAVDD		PLL analog power supply
101	TCPOUT	O	OPEN
102	PLLAVSS	O	OPEN
103	CKIO	I	81MHz clock select
104	PLLVDD		PLL
105	LVDD-105		Lch power supply
106	CLK81	I	81MHz clock input
107	VSS-107	I	GND
108	APLLVDD		Analog PLL power supply
109	ATCPOUT	O	OPEN
110	EXTCK	I	Outside clock output
111	VDD-111		Power supply
112	APLLAVDD		Analog PLL audio power supply
113	AVROUT		OPEN
114	AVCOIN		GND
115	APLLAVSS		Analog PLL audio GND
116	VREFB	I	DAC reference input
117	IREFB	I	DAC resistance terminal for bias current setting
118	COMPB	I	DAC capacity connection terminal for stabilization
119	VBOUT	O	C analog output
120	AVDD1		Analog power supply
121	VREFG	I	DAC reference input
122	IREFG	I	DAC resistance terminal for bias current setting
123	COMPG	I	DAC capacity connection terminal for stabilization
124	VGOUT	O	Cb composite analog output
125	AVSS1		Analog GND
126	VREFC	I	DAC reference input
127	IREFC	I	DAC resistance terminal for bias current setting
128	COMPC	I	DAC capacity connection terminal for stabilization
129	VCOUT	O	Cr C analog output
130	AVDD0		Analog power supply
131	VREFY	I	DAC reference input
132	IREFY	I	DAC resistance terminal for bias current setting
133	COMPY	I	DAC capacity connection terminal for stabilization
134	VYOUT	O	Y analog output
135	AVSS0		Analog GND
136	N.C.		Not used
137	ACKIO	I	Audio PLL test mode
138	MODE121	I	Clock mode select
139	PLLTEST		PLL test
140,141	TESTSEL0,1	O	Test signal
142	DCTEST	I	DC test mode
143	XVSYNCO	I/O	Vertical sync input/output
144	XHSYNCO	I/O	Horizontal sync input/output
145	VCLK	O	Video data clock
146	LVDD-146		Lch power supply
147-150	VD0-3	O	Video data bus
151	VSS-151		GND
152-155	VD4-7	O	Video data bus

Pin No.	Pin Name	I/O	Function and Operation
156	VDD-156		Power supply
157	VSS-157		GND
158	MDQ15	I/O	I/O data SDRAM
159	MDQ0	I/O	I/O data SDRAM
160	VDD-160		Power supply
161	MDQ14	I/O	I/O data SDRAM
162	MDQ1	I/O	I/O data SDRAM
163	VSS-163		GND
164	MDQ13	I/O	I/O data SDRAM
165	MDQ2	I/O	I/O data SDRAM
166	VDD-166		Power supply
167	MDQ12	I/O	I/O data SDRAM
168	MDQ3	I/O	I/O data SDRAM
169	VSS-169		GND
170	MDQ11	I/O	I/O data SDRAM
171	MDQ4	I/O	I/O data SDRAM
172	VDD-172		Power supply
173	MDQ10	I/O	I/O data SDRAM
174	LVDD-174		Lch power supply
175	MDQ5	I/O	I/O data SDRAM
176	VSS-176		GND
177	MDQ9	I/O	I/O data SDRAM
178	MDQ6	I/O	I/O data SDRAM
179	VDD-179		Power supply
180	MDQ8	I/O	I/O data SDRAM
181	MDQ7	I/O	I/O data SDRAM
182	VSS-182		GND
183	MCKI	I	SDRAM CLK input
184	VDD-184		Power supply
185	MCK	I	SDRAM CLK
186	VSS-186		GND
187	DQMLE	O	Lower byte DQ mask of extended SDRAM
188	LVDD-188		Lch power supply
189	DQMLM	O	Lower byte DQ mask of main SDRAM
190	DQMUE	O	Upper byte DQ mask of extended SDRAM
191	VDD-191		Power supply
192	DQMUM	O	Upper byte DQ mask of main SDRAM
193	XWE	O	Write signal of SDRAM
194	VSS-194		GND
195	XCAS	O	CAS of SDRAM
196	XRAS	O	RAS of SDRAM
197	VDD-197		Power supply
198	XCSE	O	CS of extended SDRAM
199	XCSM	O	CS of main SDRAM
200	VSS-200		GND
201	MA9	O	Bank sell and address
202	LVDD-202		Lch power supply
203	MA11	O	Bank sell and address
204	MA8	O	Bank sell and address
205	VDD-205		Power supply
206	MA10	O	Bank sell and address
207	MA7	O	Bank sell and address
208	VSS-208		GND

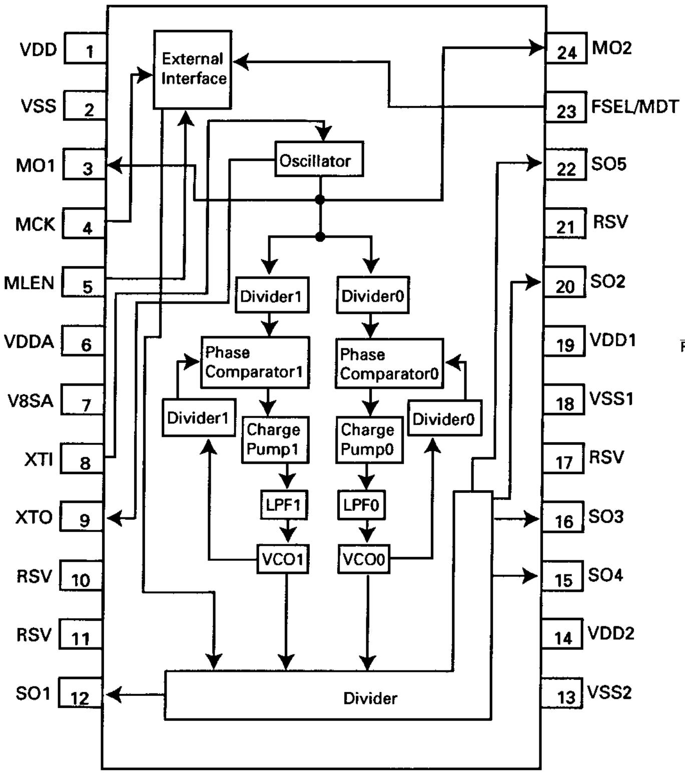
*MN677532JAUB


1 VDD-1
2 MA0
3 MA6
4 MA1
5 VSS-5
6 MA5
7 MA2
8 MA4
9 VDD-9
10 MA3
11 TEST9
12 XRST
13 TEST8
14 LVDD-14
15 TEST7
16 TEST6
17 TEST5
18 TEST4
19 VSS-19
20 TEST3
21 RFF-21
22 TEST1
23 RFF-23
24 VSS-24
25 HMD1
26 HMD0
27 XHINT
28 XDK
29 VSS-29
30 XWR
31 XRD
32 XCS
33 HCLK
34 VDD-34
35 HA1
36 HA2
37 HA3
38 HA4
39 LVDD-39
40 HA5
41 HA6
42 HA7
43 HA8
44 VSS-44
45 HA9
46 HA10
47 HA11
48 VDD-48
49 HD0
50 HD1
51 HD2
52 VSS-52
53 VDD-53
54 HD3
55 HD4
56 HD5
57 HD6
58 VSS-58
59 HD7
60 HD8
61 HD9
62 HD10
63 LVDD-63
64 HD11
65 HD12
66 HD13
67 HD14
68 VSS-68
69 HD15
70 AUDSTR
71 VSTR
72 VRQ
73 AVRTM
74 VDD-74
75 STD7
76 STD6
77 STD5
78 STD4
79 LVDD-79
80 STD3
81 STD2
82 STD1
83 STD0
84 VSS-84
85 IECOUT
86 TEST10
87 LVDD-87
88 DACCK
89 LRCK
90 SRCK
91 VDD-91
92 ADOUT0
93 ADOUT1
94 ADOUT2
95 VSS-95
96 CLKMON
97 CLK121
98 VDD-98
99 CLK27
100 PLLAVDD
101 TCPOUT
102 PLLAVSS
103 CKIO
104 PLLVDD
105 LVDD-105
106 CLK81
107 VSS-107
108 APLLVDD
109 ATCPOUT
110 EXTCK
111 VDD-111
112 APLLAVDD
113 AVROUT
114 AVCOIN
115 APLLAVSS
116 VREFB
117 IREFB
118 COMPB
119 VBOUT
120 AVDD1
121 VREFG
122 IREFG
123 COMPG
124 VGOUT
125 AVSS1
126 VREFC
127 IREFC
128 COMPC
129 VCOUT
130 AVDD0
131 VREFY
132 IREFY
133 COMPY
134 VYOUT
135 AVSS0
136 N. C.
137 ACKIO
138 MODE121
139 PLLTEST
140 TESTSEL0
141 TESTSEL1
142 DCTEST
143 XVSYNCO
144 XHSYNCO
145 VCLK
146 LVDD-146
147 VD0
148 VD1
149 VD2
150 VD3
151 VSS-151
152 VD4
153 VD5
154 VD6
155 VD7
156 VDD-156
157 VSS-157
158 MDQ15
159 MDQ0
160 VDD-160
161 MDQ14
162 MDQ1
163 VSS-163
164 MDQ13
165 MDQ2
166 VDD-166
167 MDQ12
168 MDQ3
169 VSS-169
170 MDQ11
171 MDQ4
172 VDD-172
173 MDQ10
174 LVDD-174
175 MDQ5
176 VSS-176
177 MDQ9
178 MDQ6
179 VDD-179
180 MDQ8
181 MDQ7
182 VSS-182
183 MCKI
184 VDD-184
185 MCK
186 VSS-186
187 DQMLE
188 LVDD-188
189 DQMLM
190 DQMUE
191 VDD-191
192 DQMUM
193 XWE
194 VSS-194
195 XCAS
196 XRAS
197 VDD-197
198 XCSE
199 XCSM
200 VSS-200
201 MA9
202 LVDD-202
203 MA11
204 MA8
205 VDD-205
206 MA10
207 MA7
208 VSS-208

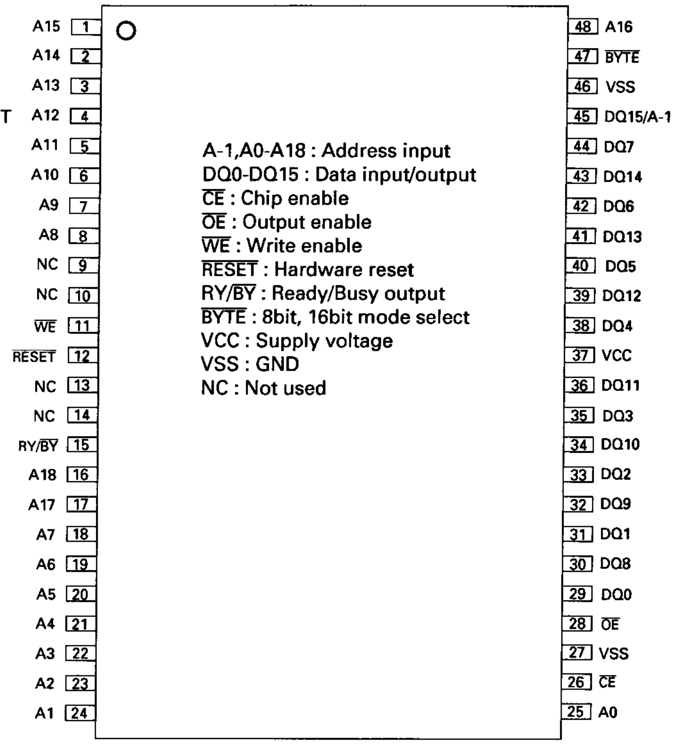
*TC74VCX04FT


14 VCC
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y
1 1A
2 1Y
3 2A
4 2Y
5 3A
6 3Y
7 GND

*SM8703AV

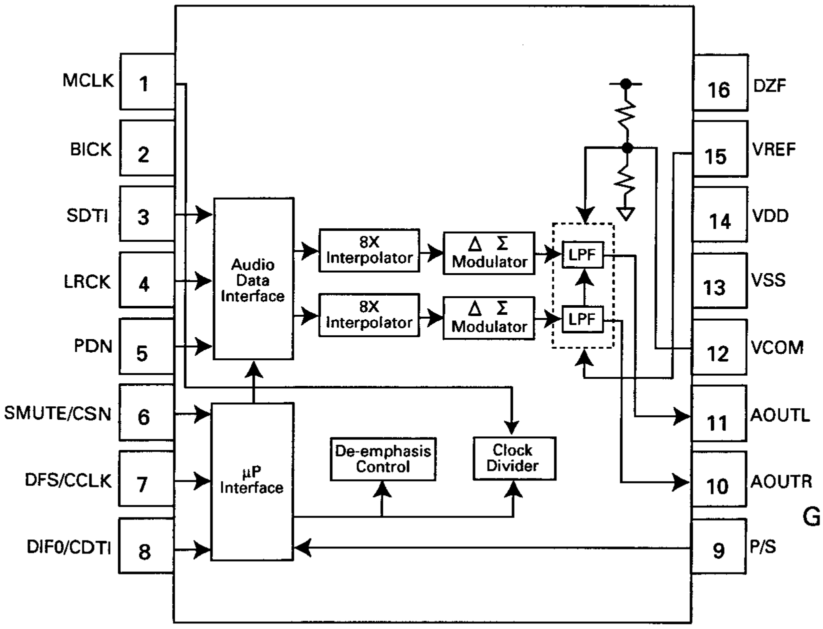

VDD 1
VSS 2
MO1 3
MCK 4
MLEN 5
VDDA 6
V8SA 7
XTI 8
XTO 9
RSV 10
RSV 11
SO1 12
24 MO2
23 FSEL/MDT
22 SO5
21 RSV
20 SO2
19 VDD1
18 VSS1
17 RSV
16 SO3
15 SO4
14 VDD2
13 VSS2
External Interface
Oscillator
Divider1
Divider0
Phase Comparator1
Phase Comparator0
Divider1
Charge Pump1
Charge Pump0
Divider0
LPF1
LPF0
VCO1
VCO0
Divider

*PD6354B

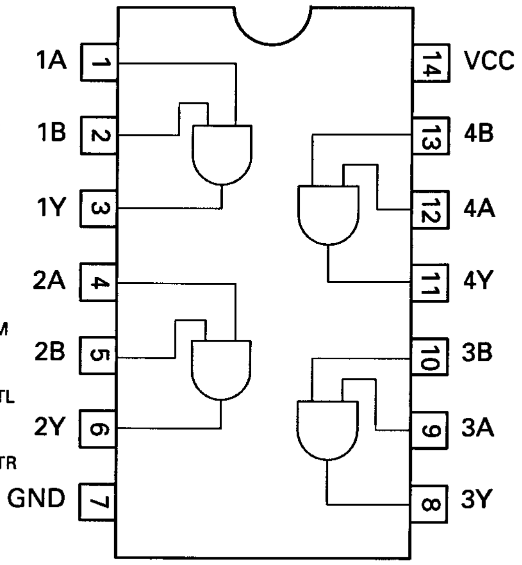

A15 1
A14 2
A13 3
A12 4
A11 5
A10 6
A9 7
A8 8
NC 9
NC 10
$\overline{WE}$ 11
$\overline{RESET}$ 12
NC 13
NC 14
RY/$\overline{BY}$ 15
A18 16
A17 17
A7 18
A6 19
A5 20
A4 21
A3 22
A2 23
A1 24
48 A16
47 $\overline{BYTE}$
46 VSS
45 DQ15/A-1
44 DQ7
43 DQ14
42 DQ6
41 DQ13
40 DQ5
39 DQ12
38 DQ4
37 VCC
36 DQ11
35 DQ3
34 DQ10
33 DQ2
32 DQ9
31 DQ1
30 DQ8
29 DQ0
28 $\overline{OE}$
27 VSS
26 $\overline{CE}$
25 A0

A-1,A0-A18 : Address input
DQ0-DQ15 : Data input/output
$\overline{CE}$: Chip enable
$\overline{OE}$: Output enable
$\overline{WE}$: Write enable
$\overline{RESET}$: Hardware reset
RY/$\overline{BY}$: Ready/Busy output
$\overline{BYTE}$: 8bit, 16bit mode select
VCC : Supply voltage
VSS : GND
NC : Not used

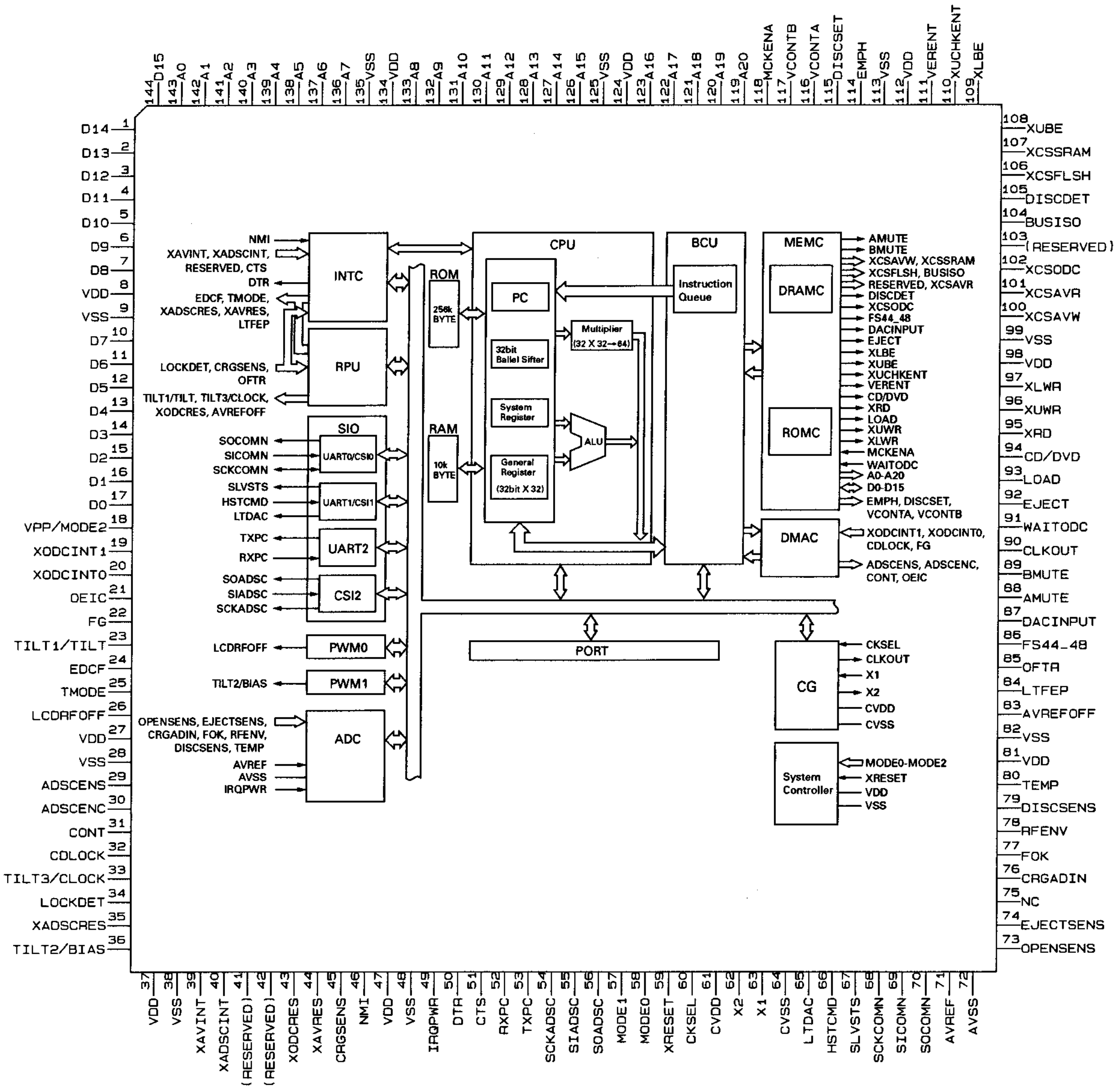
*AK4380VT


MCLK 1
BICK 2
SDTI 3
LRCK 4
PDN 5
SMUTE/CSN 6
DFS/CCLK 7
DIF0/CDTI 8
16 DZF
15 VREF
14 VDD
13 VSS
12 VCOM
11 AOUTL
10 AOUTR
9 P/S
Audio Data Interface
8X Interpolator
8X Interpolator
Δ Σ Modulator
Δ Σ Modulator
LPF
LPF
µP Interface
De-emphasis Control
Clock Divider

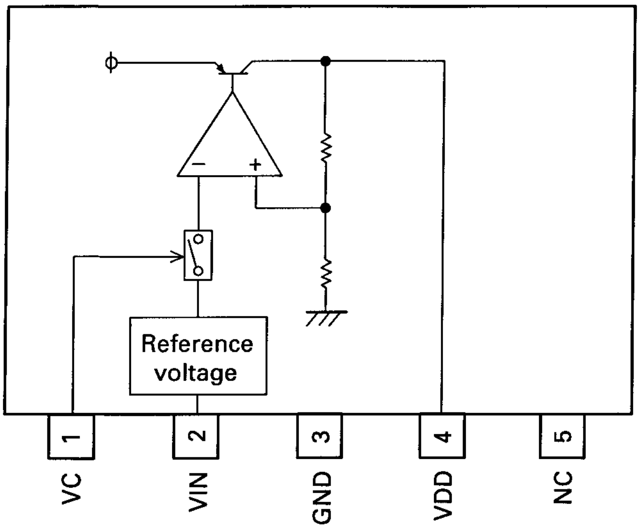
*TC74VCX08FT


1A 1
1B 2
1Y 3
2A 4
2B 5
2Y 6
GND 7
14 VCC
13 4B
12 4A
11 4Y
10 3B
9 3A
8 3Y

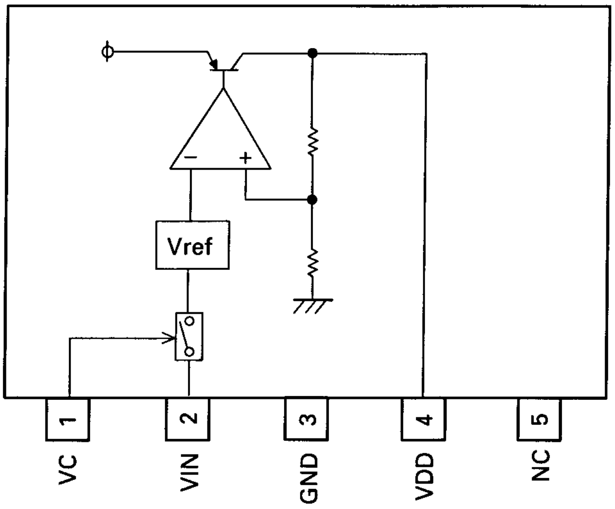
*PE5277B


144 D15
143 A0
142 A1
141 A2
140 A3
139 A4
138 A5
137 A6
136 A7
135 VSS
134 VDD
133 A8
132 A9
131 A10
130 A11
129 A12
128 A13
127 A14
126 A15
125 VSS
124 VDD
123 A16
122 A17
121 A18
120 A19
119 A20
118 MCKENA
117 VCONTB
116 VCONTA
115 DISCSET
114 EMPH
113 VSS
112 VDD
111 VERENT
110 XUCHKENT
109 XLBE
D14 1
D13 2
D12 3
D11 4
D10 5
D9 6
D8 7
VDD 8
VSS 9
D7 10
D6 11
D5 12
D4 13
D3 14
D2 15
D1 16
D0 17
VPP/MODE2 18
XODCINT1 19
XODCINT0 20
OEIC 21
FG 22
TILT1/TILT 23
EDCF 24
TMODE 25
LCDRFOFF 26
VDD 27
VSS 28
ADSCENS 29
ADSCENC 30
CONT 31
CDLOCK 32
TILT3/CLOCK 33
LOCKDET 34
XADSCRES 35
TILT2/BIAS 36
37 VDD
38 VSS
39 XAVINT
40 XADSCINT
41 (RESERVED)
42 (RESERVED)
43 XODCRES
44 XAVRES
45 CRGSENS
46 NMI
47 VDD
48 VSS
49 IRQPWR
50 DTR
51 CTS
52 RXPC
53 TXPC
54 SCKADSC
55 SIADSC
56 SOADSC
57 MODE1
58 MODE0
59 XRESET
60 CKSEL
61 CVDD
62 X2
63 X1
64 CVSS
65 LTDAC
66 HSTCMD
67 SLVSTS
68 SCKCOMN
69 SICOMN
70 SOCOMN
71 AVREF
72 AVSS
108 XUBE
107 XCSSRAM
106 XCSFLSH
105 DISCDET
104 BUSISO
103 (RESERVED)
102 XCSODC
101 XCSAVR
100 XCSAVW
99 VSS
98 VDD
97 XLWR
96 XUWR
95 XRD
94 CD/DVD
93 LOAD
92 EJECT
91 WAITODC
90 CLKOUT
89 BMUTE
88 AMUTE
87 DACINPUT
86 FS44_48
85 OFTR
84 LTFEP
83 AVREFOFF
82 VSS
81 VDD
80 TEMP
79 DISCSENS
78 RFENV
77 FOK
76 CRGADIN
75 NC
74 EJECTSENS
73 OPENSENS
NMI
XAVINT, XADSCINT, RESERVED, CTS
DTR
EDCF, TMODE, XADSCRES, XAVRES, LTFEP
INTC
LOCKDET, CRGSENS, OFTR
RPU
TILT1/TILT, TILT3/CLOCK, XODCRES, AVREFOFF
SIO
SOCOMN
SICOMN
SCKCOMN
UART0/CSI0
SLVSTS
HSTCMD
LTDAC
UART1/CSI1
TXPC
RXPC
UART2
SOADSC
SIADSC
SCKADSC
CSI2
LCDRFOFF
PWM0
TILT2/BIAS
PWM1
OPENSENS, EJECTSENS, CRGADIN, FOK, RFENV, DISCSENS, TEMP
AVREF
AVSS
IRQPWR
ADC
ROM
256k BYTE
RAM
10k BYTE
CPU
PC
32bit Ballel Sifter
System Register
General Register (32bit X 32)
Multiplier (32 X 32→64)
ALU
BCU
Instruction Queue
MEMC
DRAMC
ROMC
AMUTE
BMUTE
XCSAVW, XCSSRAM
XCSFLSH, BUSISO
RESERVED, XCSAVR
DISCDET
XCSODC
FS44_48
DACINPUT
EJECT
XLBE
XUBE
XUCHKENT
VERENT
CD/DVD
XRD
LOAD
XUWR
XLWR
MCKENA
WAITODC
A0-A20
D0-D15
EMPH, DISCSET, VCONTA, VCONTB
DMAC
XODCINT1, XODCINT0, CDLOCK, FG
ADSCENS, ADSCENC, CONT, OEIC
PORT
CG
CKSEL
CLKOUT
X1
X2
CVDD
CVSS
System Controller
MODE0-MODE2
XRESET
VDD
VSS

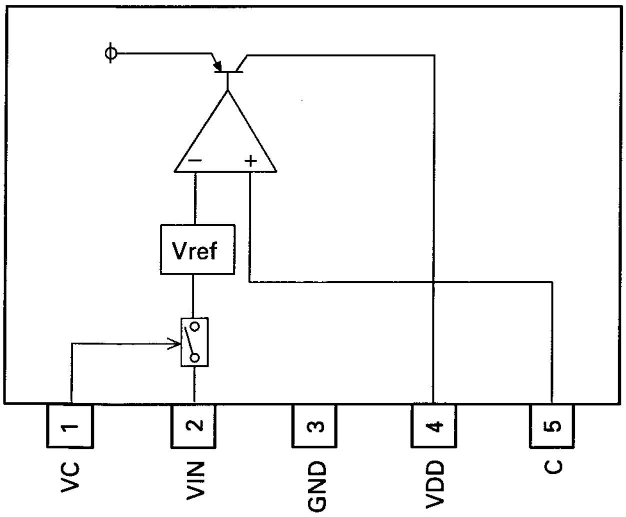
BA033SFP


Reference voltage
1
2
3
4
5
VC
VIN
GND
VDD
NC

BA18BC0WFP

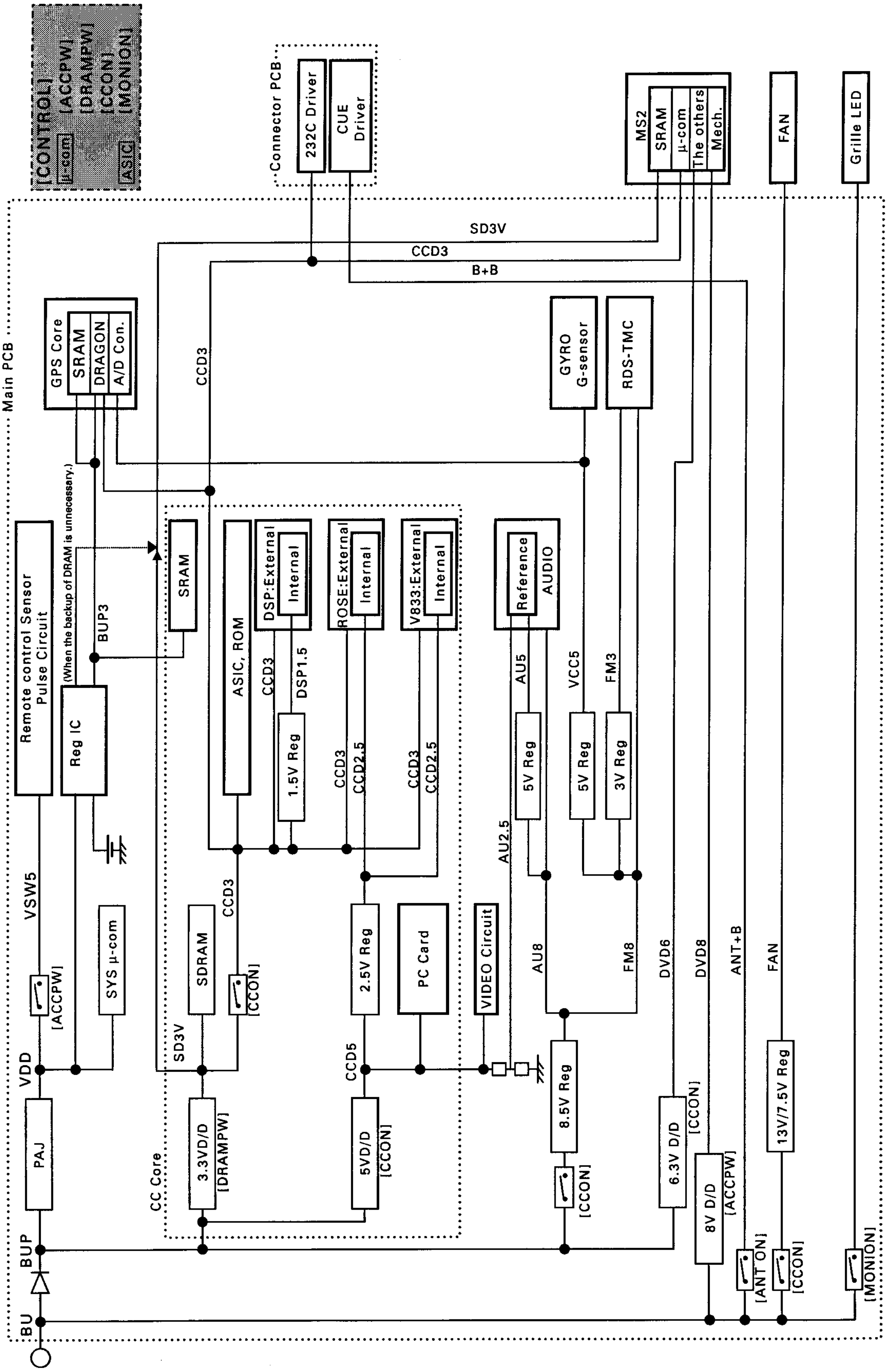

Vref
1
2
3
4
5
VC
VIN
GND
VDD
NC

BA00BC0WFP

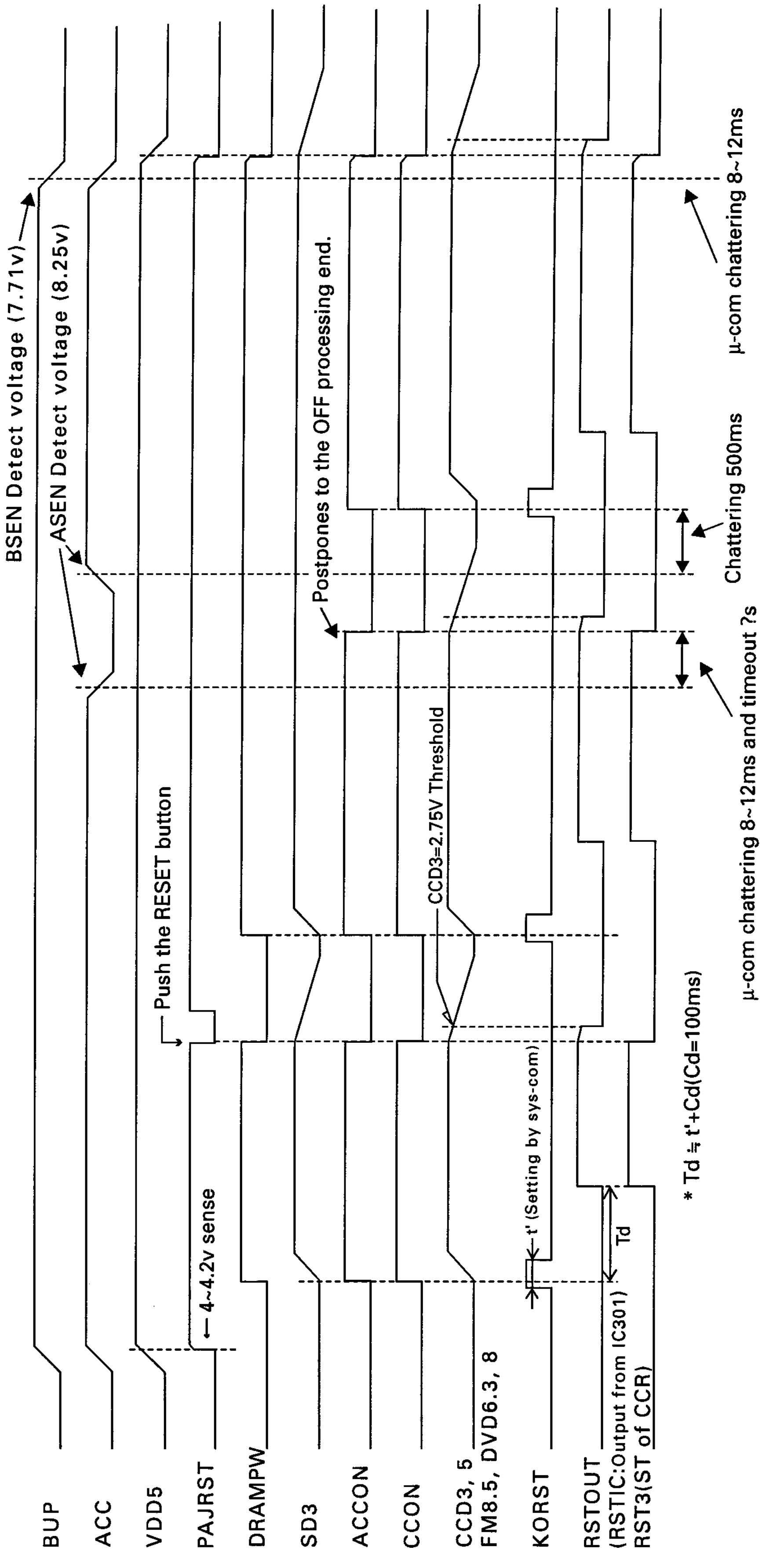

Vref
1
2
3
4
5
VC
VIN
GND
VDD
C

7.3 EXPLANATION

7.3.1 CIRCUIT DESCRIPTION


[CONTROL]
μ-com [ACCPW]
[DRAMPW]
[CCON]
ASIC [MONION]
Connector PCB
232C Driver
CUE Driver
MS2
SRAM
μ-com
The others
Mech.
FAN
Grille LED
Main PCB
SD3V
CCD3
B+B
GPS Core
SRAM
DRAGON
A/D Con.
GYRO G-sensor
RDS-TMC
(When the backup of DRAM is unnecessary.)
Remote control Sensor Pulse Circuit
Reg IC
BUP3
SRAM
ASIC, ROM
DSP:External
Internal
ROSE:External
Internal
V833:External
Internal
Reference
AUDIO
DSP1.5
1.5V Reg
CCD2.5
AU5
5V Reg
VCC5
5V Reg
FM3
3V Reg
AU2.5
VSW5
SYS μ-com
SDRAM
[CCON]
2.5V Reg
PC Card
VIDEO Circuit
AU8
FM8
DVD6
DVD8
ANT+B
[ACCPW]
VDD
PAJ
CC Core
3.3VD/D
[DRAMPW]
CCD5
5VD/D
[CCON]
8.5V Reg
[CCON]
6.3V D/D
[CCON]
8V D/D
[ACCPW]
13V/7.5V Reg
[ANT ON]
[CCON]
[MONION]
BUP
BU

7.3.2 OPERATIONAL FLOW CHART

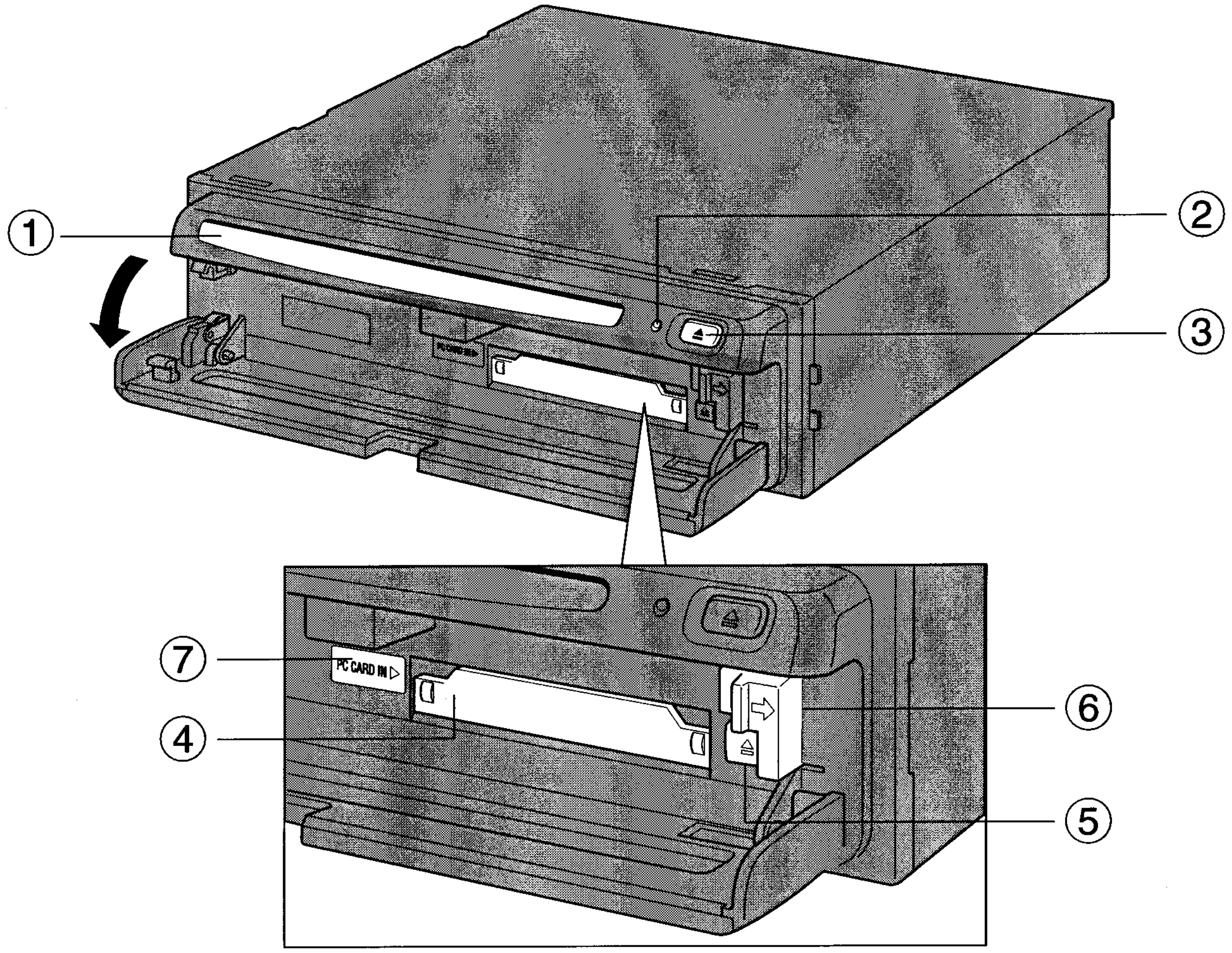

BUP
ACC
VDD5
PAJRST
DRAMPW
SD3
ACCON
CCON
CCD3, 5
FM8.5, DVD6.3, 8
KORST
RSTOUT
(RSTIC:Output from IC301)
RST3(ST of CCR)
BSEN Detect voltage (7.71v)
ASEN Detect voltage (8.25v)
Push the RESET button
4~4.2v sense
Postpones to the OFF processing end.
CCD3=2.75V Threshold
t' (Setting by sys-com)
Td
* Td ≒ t'+Cd(Cd=100ms)
μ-com chattering 8~12ms
Chattering 500ms
μ-com chattering 8~12ms and timeout ?s

8. OPERATIONS AND SPECIFICATIONS

8.1 OPERATIONS

Key Finder

Main unit



(1) Disc loading slot

(2) Reset button
If the system goes wrong, reset it by pressing this recessed button with a ballpoint pen or similar pointed object.

(3) Disc ejection button

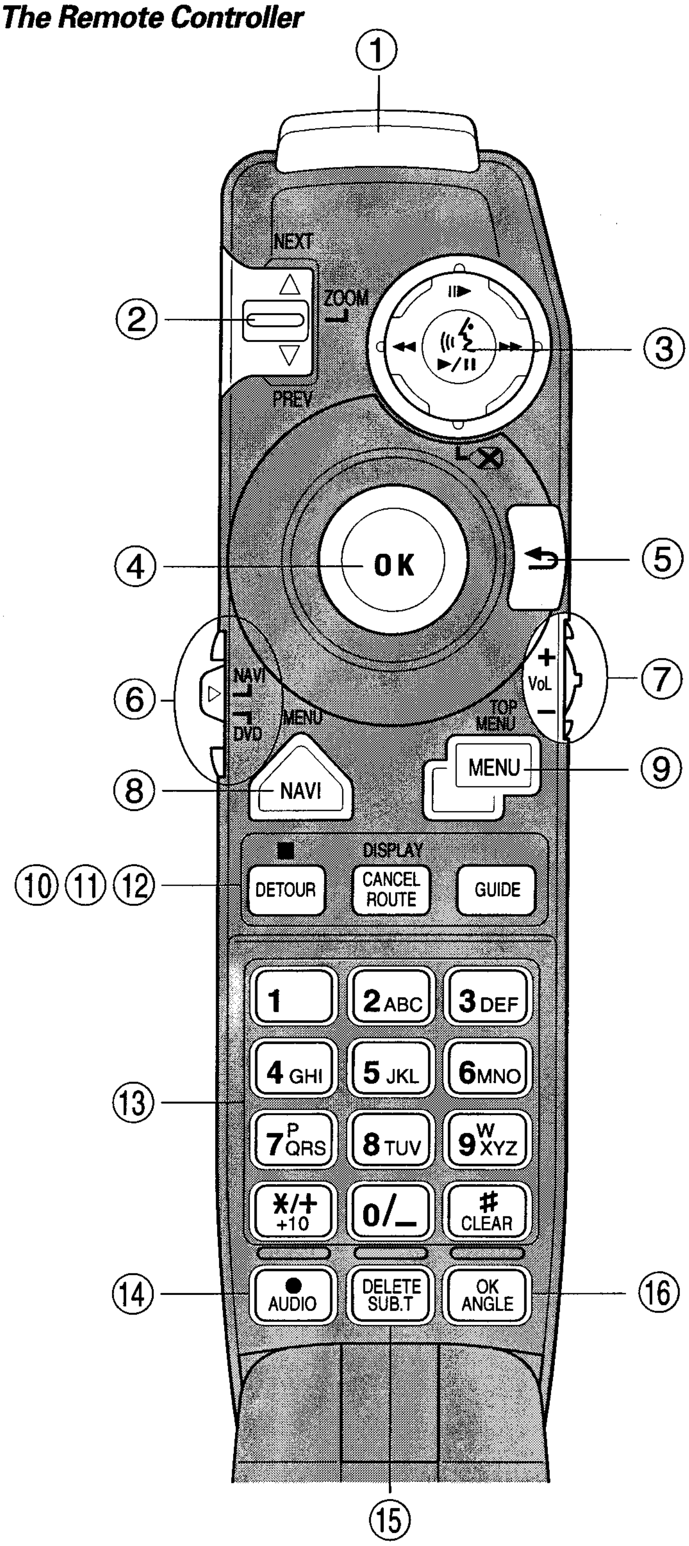
(4) PC card slot

(5) PC card ejection button
Remove the PC card by pressing this button.

(6) PC card lock lever
This lever is used when you remove the PC card.

(7) PC card lock lamp
The red light goes on when the PC card is inserted and a proper connection is made.

The Remote Controller

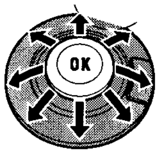

①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩⑪⑫
⑬
⑭
⑮
⑯
NEXT
ZOOM
PREV
►/II
OK
NAVI
DVD
MENU
TOP MENU
+
VoL
−
NAVI
MENU
■
DISPLAY
DETOUR
CANCEL ROUTE
GUIDE
1
2ABC
3DEF
4GHI
5JKL
6MNO
7PQRS
8TUV
9WXYZ
✱/+ +10
0/_
# CLEAR
● AUDIO
DELETE SUB.T
OK ANGLE

(1) Transmitter
Signals of the Remote Controller are transmitted from here.

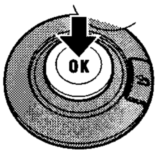
(2) Scale controller
You use the scale controller to enlarge or reduce the displayed map. When you move the scale controller downwards, the scale of the displayed map is enlarged and a more detailed map is displayed. Conversely, moving it upwards reduces the displayed map, and a wider area is displayed. Also, when a list is longer than one screen, this controller is used for indicating the next screen or previous screen.

(3) TALK button
You use the TALK button to start voice recognition, allowing you to command the Navigation System by speech. When a voice command is given, you can cycle through possible matches by clicking down this button.

(4) Joystick/OK button
Use the joystick to select items in the display and to scroll the map. The joystick is also the OK button; simply press it to select a location on the map or an option displayed on the screen.



Used as the joystick :
Directions of movements indicated by arrows are possible.



Used as the OK button :
Press straight down.

(5) BACK button

While using a menu, pressing this button cancels the present operation and returns you to the previously displayed menu or list.

(6) Mode switch

Using the Remote Controller, you can switch to operate either the Navigation System or the DVD/CD. If switching the operation mode, the function of each button on the Remote Controller is also switched.

(7) VOL dial

When you turn the dial downwards, the volume decreases. Turning it upwards increases the volume.

- When the Dipswitch 2 is OFF, volume of the voice guidance of the Navigation System is adjusted.
- When the Dipswitch 2 is ON, the volume of Pioneer Head Unit is adjusted. If the dial is pressed, the volume is reduced to around 1/10th of the volume (ATT function). When pressed again, the volume returns to its previous level.

(8) NAVI button

You press the NAVI button to view the map or return to guidance. Also, when the map is scrolled, pressing this button returns to the display of the map of your surroundings.

(9) MENU button

Pressing the MENU button displays a menu of options.

(10) DETOUR button

Press this button to restart route calculation, such as calculating a detour. If this button is pressed for more than two seconds, you can see the information (passing roads and driving distance, and so on) of the route down which you are currently being guided.

(11) CANCEL ROUTE button

Press this button to cancel the route guidance. When pressed for more than two seconds, the next via point is recognised as already being passed, and a new route calculation starts.

(12) GUIDE button

Press this button if you did not hear the voice guidance properly. If this button is pressed for more than two seconds, you can listen to traffic information (where available.).

(13) Numeric keypad

You use this pad for entering characters or numbers.

(14) • (AUDIO) button

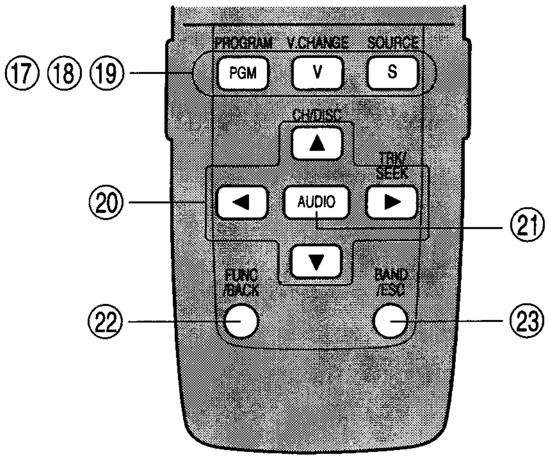
Use this button when the Navigation System is combined with another manufacturer's display . This button is used only when the navigation image (RGB image) is output from RCA Video output (yellow) of the Hide-away Unit of this product. (For details, see the installation manual.)

(15) DELETE button

Press to delete the character you just entered. If you press this button for more than two seconds, all the characters entered will be deleted.

(16) OK button for numeric keypad

This works in the same way as "OK" on the text palette.


⑰ ⑱ ⑲
PROGRAM
V.CHANGE
SOURCE
PGM
V
S
CH/DISC
TRK/SEEK
⑳
AUDIO
㉑
FUNC/BACK
BAND/ESC
㉒
㉓

(17) PROGRAM button (for audio operation)

(18) V.CHANGE button (for audio operation)

(19) SOURCE button (for audio operation)

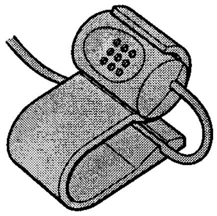
(20) Cross Key /▲, ▼, ◀, ▶ button (for audio operation)

(21) AUDIO button (for audio operation)

(22) FUNC/BACK button (for audio operation)

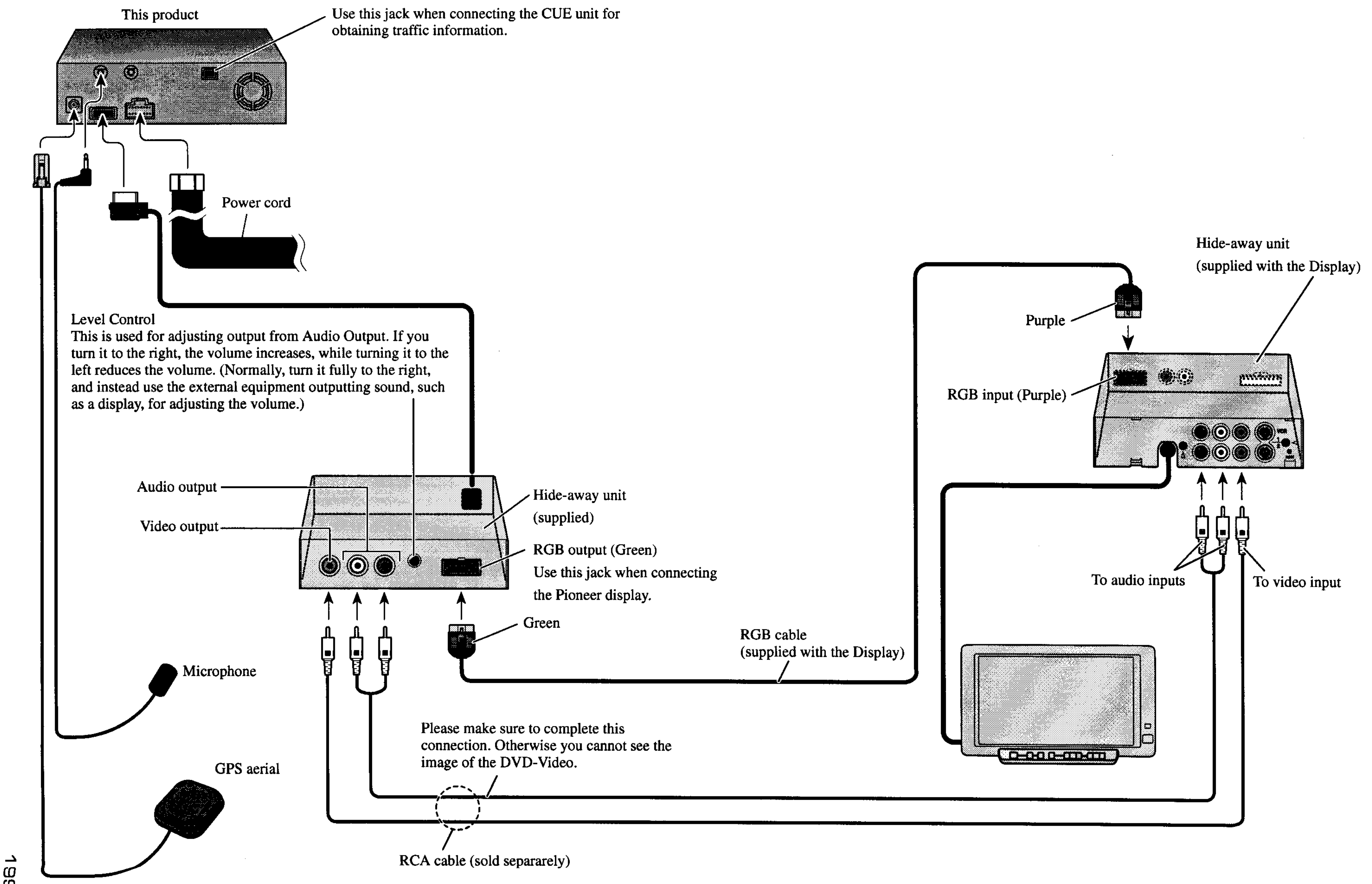
(23) BAND/ESC button (for audio operation)

Microphone



(1) Microphone
After pressing the TALK button to start voice operation, this microphone hears your commands.

Connecting the System



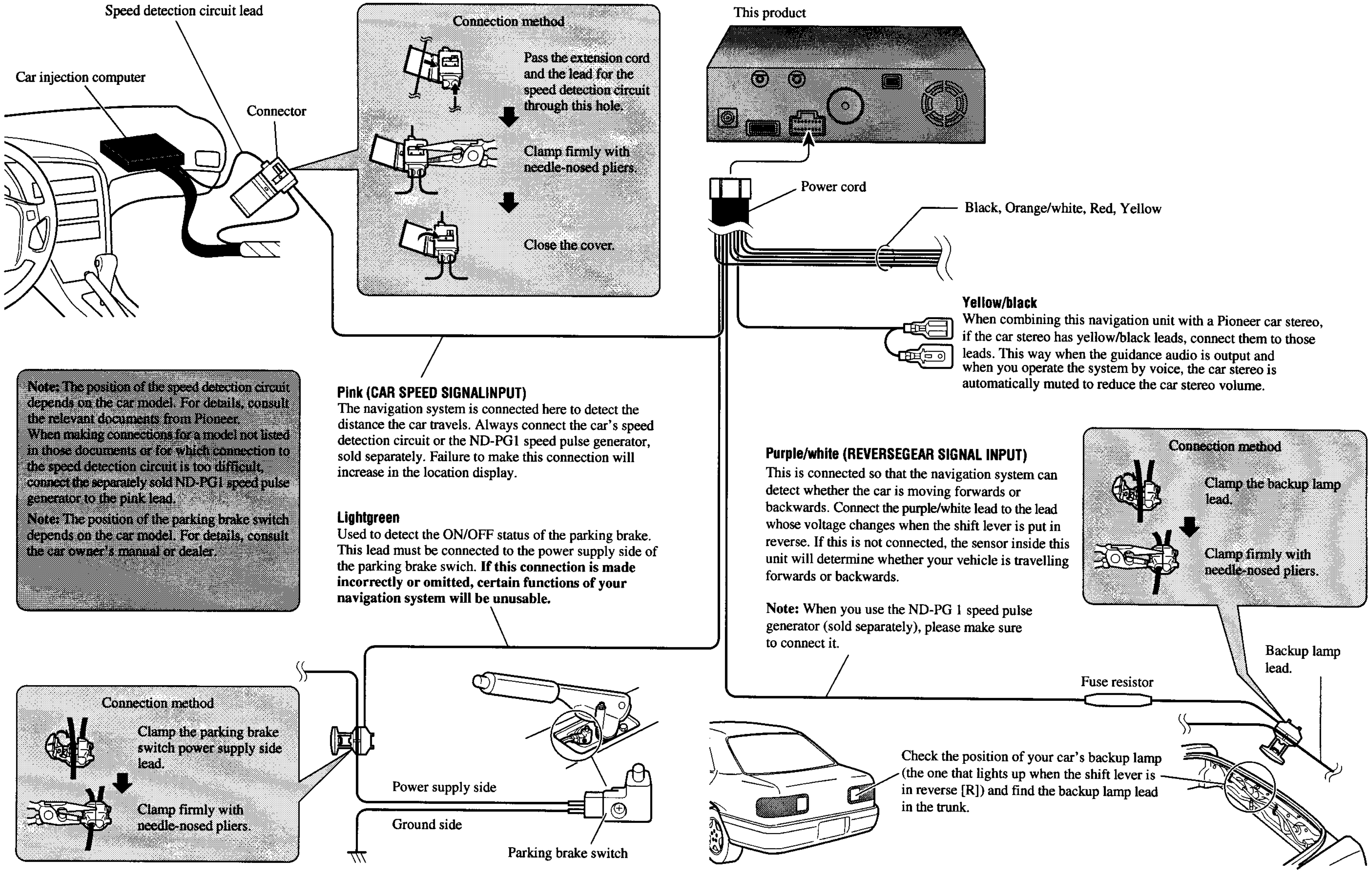
Use this jack when connecting the CUE unit for obtaining traffic information.

Level Control
This is used for adjusting output from Audio Output. If you turn it to the right, the volume increases, while turning it to the left reduces the volume. (Normally, turn it fully to the right, and instead use the external equipment outputting sound, such as a display, for adjusting the volume.)

RGB output (Green)
Use this jack when connecting the Pioneer display.

Please make sure to complete this connection. Otherwise you cannot see the image of the DVD-Video.

This product
Power cord
Audio output
Video output
Hide-away unit (supplied)
Green
Microphone
GPS aerial
RGB cable (supplied with the Display)
RCA cable (sold separarely)
Purple
RGB input (Purple)
Hide-away unit (supplied with the Display)
To audio inputs
To video input


Speed detection circuit lead
Car injection computer
Connector
Connection method
Pass the extension cord and the lead for the speed detection circuit through this hole.
Clamp firmly with needle-nosed pliers.
Close the cover.
This product
Power cord
Black, Orange/white, Red, Yellow
Connection method
Clamp the backup lamp lead.
Clamp firmly with needle-nosed pliers.
Backup lamp lead.
Fuse resistor
Connection method
Clamp the parking brake switch power supply side lead.
Clamp firmly with needle-nosed pliers.
Power supply side
Ground side
Parking brake switch

Yellow/black
When combining this navigation unit with a Pioneer car stereo, if the car stereo has yellow/black leads, connect them to those leads. This way when the guidance audio is output and when you operate the system by voice, the car stereo is automatically muted to reduce the car stereo volume.

Note: The position of the speed detection circuit depends on the car model. For details, consult the relevant documents from Pioneer.
When making connections for a model not listed in those documents or for which connection to the speed detection circuit is too difficult, connect the separately sold ND-PG1 speed pulse generator to the pink lead.
Note: The position of the parking brake switch depends on the car model. For details, consult the car owner's manual or dealer.

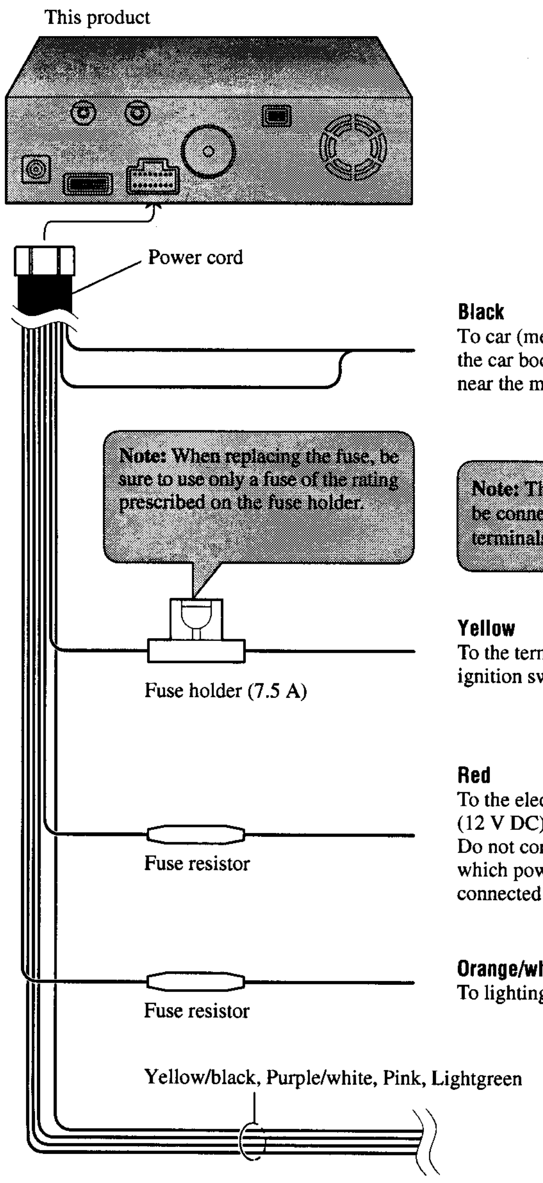
Pink (CAR SPEED SIGNALINPUT)
The navigation system is connected here to detect the distance the car travels. Always connect the car's speed detection circuit or the ND-PG1 speed pulse generator, sold separately. Failure to make this connection will increase in the location display.

Lightgreen
Used to detect the ON/OFF status of the parking brake. This lead must be connected to the power supply side of the parking brake swich. **If this connection is made incorrectly or omitted, certain functions of your navigation system will be unusable.**

Purple/white (REVERSEGEAR SIGNAL INPUT)
This is connected so that the navigation system can detect whether the car is moving forwards or backwards. Connect the purple/white lead to the lead whose voltage changes when the shift lever is put in reverse. If this is not connected, the sensor inside this unit will determine whether your vehicle is travelling forwards or backwards.

Note: When you use the ND-PG 1 speed pulse generator (sold separately), please make sure to connect it.

Check the position of your car's backup lamp (the one that lights up when the shift lever is in reverse [R]) and find the backup lamp lead in the trunk.


This product
Power cord
Fuse holder (7.5 A)
Fuse resistor
Fuse resistor
Yellow/black, Purple/white, Pink, Lightgreen

Note: When replacing the fuse, be sure to use only a fuse of the rating prescribed on the fuse holder.

Black
To car (metal) body. To keep electromagnetic noise from the car body out of the navigation system, attach this lead near the main unit.

Note: The yellow, red, and orange/white leads should be connected to the opposite side of the fusebox terminals from the battery.

Yellow
To the terminal always supplied with power regardless of ignition switch position.

Red
To the electric terminal controlled by the ignition switch (12 V DC) ON/OFF.
Do not connect this lead to power source terminals to which power is continuously supplied. If the lead is connected to such terminals, the battery may be drained.

Orange/white
To lighting switch terminal.

8.2 SPECIFICATIONS

Specifications

Main unit
(GPS receiver)
System : L1, C/Acode GPS
SPS (Standard Positioning Service)
Reception system : 8-channel multi-channel reception system
Reception frequency : 1,575.42 MHz
Sensitivity : -130 dbm
Frequency : Approx. once a second

(Common)
Max. output impedance : 1Vp-p, 75Ω
Maximum current consumption : 2 A
Power source : DC 14.4V (10.8 - 15.1V allowed)
Ground type : Negative type
Buckup current : 4mA or less

GPS antenna
Antenna : Micro strip flat antenna/right-handed helical polarization
Antenna cable : 5.0 m (196-7/8 in)

Dimensions
Main unit : 178(W) X 50(H) X 178(D) mm (7 X 2 X 7 in)
GPS antenna : 46(W) X 46(H) X13(D) mm (1-3/4 X 1-3/4 X 1/2 in)
Remote controller : 38(W) X 146(H) X 30(D) mm (1-1/2 X 5-3/4 X 1/8 in)

Weight
Main unit : 1.5 kg (3.3 lbs.)
GPS aerial : 130g (0.31 lbs.)
Remote controller : 80g (incl. battery) (0.2 lbs.)

DVD mechanism part
REGION NUMBER : 1
USABLE DISCS : DVD-VIDEO/CD
SIGNAL FORMAT
Sampling frequency : 44.1/48/96KHz
Number of quantization bits : 16/20/24 bit; linear
FREQUENCY RESPONSE : 5~44,000Hz (± 1dB)
S/N RATIO : 96dB (IEC-A NETWORK)
97dB (IEC-A NETWORK): CD
DINAMIC RANGE : 96dB (1kHz)
95dB (1kHz): CD
DISTORTION : 0.008% (1kHz)
OUTPUT LEVEL VIDEO : 1Vp-p/75Ω
AUDIO : 1mV (1kHz,0dB)
NUMBER OF CHANNELS : 2 (STEREO)

Note:

- The specifications and design are subject to change without prior notice. The product purchased may differ in detail from illustrations in this manual.